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Print Edition — March 10th 2007

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China's new property law is a breakthrough, even though it raises hopes that one-party rule may dash: leader

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Politics this week

Mar 8th 2007
From The Economist print edition

AFP

Lewis "Scooter" Libby, the former chief of staff to Vice-President Dick Cheney, was convicted on four out of five counts of lying to FBI agents and obstruction of justice. The charges had arisen from the leaking of the name of a CIA agent to the press, in an attempt to discredit an opponent of the invasion of Iraq. Mr Libby's conviction added to the administration's growing embarrassment about the war—and about Mr Cheney, one of its chief promoters. See article

Reports of dilapidated facilities and patient neglect at America's foremost military hospital, the **Walter Reed Army Medical Centre**, where many casualties of the Iraq war are being treated, caused uproar in Congress. On March 1st the man in charge of the hospital, Major-General George Weightman, was fired, and the next day the army secretary, Francis Harvey, was forced to resign. President George Bush announced that he was setting up a bipartisan panel to look into the treatment of wounded soldiers. See article

Old wounds

Shinzo Abe, **Japan's** prime minister, caused offence in neighbouring countries and elsewhere by suggesting there was no clear evidence that some 200,000 women who worked as prostitutes for the Japanese army in the 1930s and 1940s had been coerced. See article

China's parliament, the **National People's Congress**, opened its annual 12-day session. The budget was announced, including an unusual 18% increase in spending on defence. In his "work report", Wen Jiabao, the prime minister, promised to reduce inequality. The NPC is expected to pass a controversial law enshrining private property rights. See article

A powerful earthquake struck the Indonesian island of **Sumatra**, near the city of Padang, killing more than 50 people. The next day, more than 20 died in a plane crash at Yogyakarta, on the neighbouring island of **Java**. See article

After last month's agreement on steps towards ending its nuclear programme, **North Korea** started bilateral talks on normalising relations with both America and Japan. The talks with Japan ended abruptly on their second day, after a North Korean walkout, apparently in anger at Japan's stance on North Korea's abduction of Japanese citizens in the 1970s and 1980s.

Plans for peace

Jordan's King Abdullah gave an address to both houses of the American Congress, urging new diplomacy to solve the **Palestinian conflict**. Reports suggested that a quartet of Arab states—Egypt, Jordan, Saudi Arabia and the United Arab Emirates—could join Israel, the Palestinian president and the United States in talks.

AFP

After a slight drop in **Iraq's** sectarian killings, two suicide-bombers, presumed to be Sunni insurgents, killed at least 117 Shia pilgrims on their way to a festival in the holy city of Karbala, where more than 1m had gathered; at least 40 others were also killed in attacks en route. See article

A former deputy defence minister of **Iran**, Ali Reza Asghari, a retired general,

was reported to have disappeared last month in Turkey; a Saudi newspaper claimed he was being questioned “in a northern European country” before being flown to the United States. It was not clear whether he had defected or been kidnapped.

The first African Union peacekeeping troops, from Uganda, arrived in **Somalia's** capital, Mogadishu, to replace Ethiopian troops who helped the country's transitional government defeat the Islamist militias earlier this year. They were greeted at the airport by mortar fire from insurgents.

Three Britons, a British-Italian woman and a French woman disappeared in eastern **Ethiopia**; their vehicles were found, shot up. Rebels of the Afar tribe were suspected of kidnapping them. See article

Côte d'Ivoire's president, Laurent Gbagbo, and the main rebel leader, Guillaume Soro, signed an agreement to end the divided country's civil war. The accord sets out a timetable for disarmament, voter registration and fresh elections. See article

The **Nigerian** ruling party's presidential candidate, Umaru Yar'Adua, who has a kidney illness, flew to Germany for a medical examination, casting more doubt on his suitability as the front-runner in next month's election.

Avuncular Sam

Before departing for a week-long trip to five Latin American countries, **George Bush** emphasised his commitment to helping the region with social justice, including health, education and housing.

Oscar Berger, the president of **Guatemala**, ordered a purge of the police. Four police officers, including the head of the organised-crime unit, were accused of the murder last month of three politicians from El Salvador; the police concerned were themselves murdered days later in jail.

An outbreak of **dengue fever** in central South America worsened. Ten people have died in Paraguay; Bolivia, Brazil and Argentina have also suffered outbreaks, prompted by heavy rains and flooding.

Once there were peers

Getty Images

Britain's House of Commons voted to create a fully elected **House of Lords**. Tony Blair, the prime minister, and Jack Straw, the Commons' leader, had favoured a half-elected, half-appointed upper house. See article

European Union leaders held a summit in Brussels to discuss climate change, energy policy and the progress of economic reform.

Estonia's centre-right prime minister, Andrus Ansip, is likely to remain in office after his party and its coalition partner took the most votes in the country's parliamentary election. This is a rare case of a government being re-elected in eastern Europe.

Planned job cuts at Airbus became an issue in the **French presidential election**. As some 15,000 workers went on strike in Toulouse, both of the main candidates, Nicolas Sarkozy and Ségolène Royal, promised to pump more public money into Airbus's parent company if need be to protect jobs in France.

Ramush Haradinaj, a former prime minister of **Kosovo** who was a leader of the Kosovo Liberation Army in the 1998-99 war, went on trial before the war-crimes tribunal in The Hague. The chief prosecutor, Carla del Ponte, gave warning that some witnesses against Mr Haradinaj were being intimidated.

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Business this week

Mar 8th 2007
From The Economist print edition

America's economy betrayed signs of slower growth. Labour costs rose and factory orders hit a six-year low, with orders for big-ticket items falling. Meanwhile, the government reported that productivity gains slowed, with an increase in the final quarter of 2006 of about half of what economists had previously expected.

Alan Greenspan, former chairman of the Federal Reserve, said there is a "one-third probability" of an American recession this year. He also predicted (before the latest economic data were released) that the current economic expansion will not last as long as the previous one. But Mr Greenspan, who has been particularly outspoken lately, stands in contrast with his successor, **Ben Bernanke**, who recently told Congress the Fed believes that the American economy will strengthen this year. See article

Meanwhile **Mr Bernanke** continued the Fed's campaign to rein in the mortgage portfolios held by two government-sponsored enterprises, Fannie Mae and Freddie Mac. Mr Bernanke suggested that the companies' sizes and structures posed a risk to financial markets. He called for stronger regulation and supervision of the institutions.

Oil prices jumped after the American government reported an unexpected drop in crude-oil stocks amid the lowest import levels since 2005. Analysts had been expecting an increase.

Investigations into trading in the shares of **New Century Financial**, a big lender in the subprime-mortgage market, highlighted ongoing problems in the industry. Several big lenders have suffered from a growing number of defaults and late payments. See article

New limits on **tax relief** offered on shareholder loans in highly leveraged deals will reportedly be reviewed by Britain. The proposed change could have an effect on booming—and controversial—**private equity**.

Claims discounted

Eliot Spitzer, the former attorney-general of New York state, was criticised by a panel of retired judges. After a review, the group discounted his charges that Maurice Greenberg, the boss of American International Group, a big insurance company, had a conflict of interest that hurt his charitable foundation while benefiting AIG. Mr Spitzer is now New York's governor.

Thousands of **Airbus employees** went on strike in France to protest against a radical company restructuring that has drawn criticism from candidates in France's fiercely contested presidential race. The European aircraft-maker plans a total of 10,000 job cuts across the region in the next four years, including 4,300 in France. Politicians have made competing offers to save jobs.

Luc Vandevelde, the chairman of **Carrefour**, resigned in a feud with its controlling family. He was replaced by a member of that family. Meanwhile, a pair of activist investors, including Bernard Arnault, France's richest man, bought a big stake in the French-based retail chain.

Britain faced heavy lobbying from the European Commission to accept an **"open skies"** agreement that it struck with America. About 40% of US-European air traffic goes through London's airports. But Britain objects to the provisional air-travel accord, contending that America has failed to give European airlines sufficient access to its own market. See article

Citigroup announced a bid of ¥1,350 ($12) per share for Nikko Cordial, a Japanese brokerage firm. The deal values Nikko at up to ¥1.3 trillion. Citigroup was also reported to be in talks with the Bank of Overseas Chinese about buying a stake in the Taiwanese financial institution.

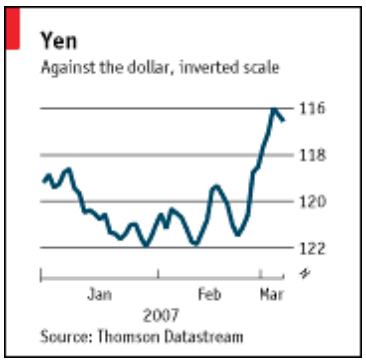
Slower motion

Research in Motion said Jim Balsillie was resigning as chairman of the technology company. The news came after the firm, which makes the BlackBerry, reported accounting errors on stock options of more than $250m. Mr Balsillie will stay on as a director and co-chief executive of the company.

Federal regulators charged that investors pocketed more than $5.3m in illegal profits from insider trading before **TXU**, an American utility, said it had agreed to be sold for $45 billion by a group led by big private-equity firms. The Securities and Exchange Commission, the market regulator, said the insider trading was undertaken through foreign brokers to conceal the investors' identities. See article

Bouncing back

The **yen** continued its volatile swings against the dollar. The Japanese currency had climbed rapidly against the dollar after falling slowly in January, but later gave up some of its gains.



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Property rights in China

China's next revolution

Mar 8th 2007
From The Economist print edition

A new property law is a breakthrough, even though it raises hopes that one-party rule may dash

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Get article background

SOME 2,500 years ago, one of Confucius's big ideas was the “rectification of names”. If only, he argued, sons would behave filially, fathers paternally, kings royally and subjects loyally, all would be well with the world. A faint echo of this thesis has been resounding this week in the cavernous auditorium of Beijing's Great Hall of the People, where nearly 3,000 delegates to China's parliament, the National People's Congress (NPC), have been enjoying their annual fortnight of wining, dining, snoozing and pressing the “yes” button. Living up to one's name poses something of a problem for the Chinese Communist Party, which dictates the laws the NPC will pass, and whose name in Chinese literally means “the public-property party”.

To such a party it must be an ideological embarrassment that China has such a large and flourishing private sector, accounting for some two-thirds of GDP. So one law due to receive the NPC's rubber stamp this month, giving individuals the same legal protection for their property as the state, has proved unusually contentious. It was to be passed a year ago, but was delayed after howls of protest from leftists, who see it as among the final of many sell-outs of the ideas of Marx, Lenin and Mao Zedong, to which the party pretends fealty.

The party's decision to enact the law in spite of that resistance is a great symbolic victory for economic reform and the rule of law. Clearer, enforceable property rights are essential if China's fantastic 30-year boom is to continue and if the tensions it has generated are to be managed without widespread violence. Every month sees thousands of protests across China by poor farmers outraged at the expropriation of their land for piffling or no compensation. As in previous years, placating those left behind in China's rush for growth has been a main theme of the NPC (see article).

In the cities, and of greater importance to the decision-makers pushing the law through, a growing middle class with its wealth tied up in houses wants to pass these assets on to their only children. These people are anxious about the security of their property and, like their fellows in the countryside, are becoming more assertive. In other countries the emergence of this group as an important political constituency has been followed by an unstoppable drift towards greater pluralism.

A journey of a thousand steps

In the short term, however, do not expect too much. The latest law is only one step in the slow trudge China is making out of the blind alley of Maoism. One big change in 2002 allowed businessmen to join the Communist Party, thus turning the revolutionary vanguard into a networking opportunity for bosses. In 2004 China changed the country's constitution to enshrine private-property rights. But the constitution is less a prescriptive document than a constantly changing description of what has just happened. So nothing changed.

This latest law, likewise, will not bring the full property-rights revolution China's development demands. Indeed, it will not meet the most crying need: to give peasants marketable ownership rights to the land they farm. If they could sell their land, tens of millions of underemployed farmers might find productive work. Those who stay on the farm could acquire bigger land holdings and use them more efficiently. Nor will the new law let peasants use their land as security on which they could borrow and invest to boost productivity. Nor, even now, will they be free from the threat of expropriation, another disincentive to investment. Much good land has already been grabbed, and the new law will merely protect the grabbers' gains.

This law cannot in itself resolve the murkiest question: who owns what? This is especially true in the countryside, where the mass collectivisation during Mao's Great Leap Forward of half a century ago left farmland “collectively” owned. Peasants have since been granted short (30-year) leases. But even outside agriculture it is often unclear whether a “private” enterprise is really owned by individuals or by a local government or party unit. Conversely, some “collective” or “state” enterprises operate in ways indistinguishable from the private interests of their bosses. Moreover, should an underdog try to use the new law to enforce his rights, the corrupt and pliant judiciary would usually ensure he was wasting his time. Since the Cultural Revolution, when the NPC passed just one law between 1967 and 1976, the legislature has been legislating quite prolifically. But the passage of laws is not the rule of law.

Which leads to a final obstacle: without an accountable executive branch, the necessary reform of the legal system is not going to happen. As the passage of the property law itself demonstrates, the party is showing itself somewhat more responsive to public opinion than it was in the past. But it still runs a government that does its best to silence most dissenting voices, strictly controls the press, and lavishes resources on the best cyber-censorship money can buy. Property rights are a start; but only contested politics and relatively open media can ensure that they are enforceable.

Petty-bourgeois fanaticism can be good for you

No revolution today then. Yet in the long term the leftist opponents of China's property law are surely right to be worried about what has been begun this month. They understand the law will entrench the rights of the carpet-baggers who have looted the state as it has privatised assets. They also understand that the law, for all its technicalities, does not chime with an avowedly communist government.

The leftists derive their theory not from Confucius, but from Marx. Were the latter writing today, he would surely see in China a revolution waiting to happen—or perhaps two. One is the bourgeois revolution led by the emerging property-owning middle class that the new law will help. The other is the potential for the simmering resentment in the countryside to boil over, perhaps in frustration at the law's shortcomings. Property rights are at the root of both—which is why the dozing NPC delegates may have started a process this month that will one day change their country completely.

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Japan

No comfort for Abe

Mar 8th 2007
From The Economist print edition

Japan's prime minister picks a shameful fight over the organised rape of thousands of women

AP

Japan's politics

SIX months ago Japan, whose leaders have often been dull political ciphers, celebrated an unaccustomed transition: the handover of power from a confident, reforming prime minister, Junichiro Koizumi, to an assertive, seemingly capable successor, Shinzo Abe. Mr Koizumi had pulled the economy out of its slump, and built up respect abroad. Japan may have failed last year to win the permanent seat on the United Nations Security Council that it covets, but its diplomats, aid workers and (in modest but useful numbers) its soldiers, sailors and airmen are now ever more routinely deployed—and appreciated—in troublespots and disaster zones from Asia and Africa to the Middle East. Mr Abe has talked about his fellow citizens taking new pride in their “beautiful country”.

So they should. But sadly for those who expected better from Mr Abe, he seems to think he can build pride in the future on untruths about Japan's past.

Mr Abe started promisingly enough. By adopting a more subtle approach towards China and South Korea he undid much of the damage Mr Koizumi had caused by his stubborn visits to the Yasukuni shrine honouring Japan's war dead (where the souls of some convicted war criminals have also been “enshrined” at the request of their families). Then last week he squandered all the goodwill. Planting his own feet in the mire of imperial Japan's wartime history, he questioned whether the 200,000 or so “comfort women” (from Korea, the Philippines, China, Taiwan, Indonesia, Burma and elsewhere) herded into the system of brothels run by the Japanese Imperial Army had really been coerced into their sexual servitude. Strictly speaking, Mr Abe said, there was no evidence of that.

Is he deaf? The first-hand evidence has mounted since some of the women courageously started breaking their silence, after decades of shame, in the early 1990s. More testified recently at hearings in America's House of Representatives, where efforts are under way to pass a resolution calling on Japan to make a full apology, and where some of the victims explained, painfully, just how wartime sex slavery was for them. There would be more evidence too, if successive Japanese governments had not buried it in closed files or destroyed it.

Why pick this shameful fight? Other blunders have left Mr Abe dependent on his party's noisy ultra-

conservatives (see article). Resentful even of Japan's past carefully parsed apologies for its wartime aggression, a group is now campaigning to overturn a 1993 statement by a cabinet official, noticeably unsupported by the parliament of the day, that for the first time accepted the army's role in setting up the brothels.

The past is your country too

What the brothel survivors want is that full apology from Japan; they refuse to be fobbed off with offers of money instead from a private fund. By questioning their testimony—in effect, calling them liars—Mr Abe has instead added modern insult to past injury. But the damage goes wider. It revives distrust among Japan's neighbours. And it belittles the efforts of those admirable Japanese working alongside others in the world's dangerous places to help rebuild communities where people have sometimes suffered the same wartime traumas as the “comfort women”—victims of organised rape, in any other language than prime-ministerial Japanese.

Japan is not unique in its reluctance to confront a grim past. Though China lambasted Mr Abe for his statement, its Communist Party has never accepted responsibility for the 30m deaths from Mao's self-inflicted famines of the 1950s, for example. But six decades on, deliberate amnesia is unworthy of modern, democratic Japan. Shame on you, Mr Abe.

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Financial markets

Still not sober

Mar 8th 2007
From The Economist print edition

Why investors should still be wary

AFTER Grey Tuesday, a Tuesday of a brighter hue: on March 6th, having endured a rocky week, the world's main stockmarkets made up some ground. With impressive ease, Wall Street shrugged off some unwelcome economic data—and held steady the next day too. After its most troublesome week since its bull run began four years ago, the S&P 500 index had lost less than 4%, a mere sliver of its gains. Most stockmarkets in the rich world had fallen back only as far as their levels of early December. Shanghai, where the trouble began, stood merely where it did in mid-February.

Is the storm over? One puzzle for economists is that this week's data were if anything more gloomy than last week's. Further evidence came in that the economic cycle is ageing: America's fourth-quarter productivity growth was marked down sharply, to just 1.6% at an annual rate; American unit labour costs leapt in the same quarter, by an annualised 6.6%. Last week Alan Greenspan caused a scare by merely mentioning the possibility of a recession; this week the former Fed chairman put more precise (and worrying) odds on this happening—one in three. Yet the markets cheered.

It goes wider than that. Look around the financial world (see article) and, even after the recent adjustments, the days of low volatility, cheap money and ample liquidity seem far from over. The yen is still relatively cheap, allowing some steamroller-dodgers to talk breezily about a resumption of the carry trade (where you borrow in the Japanese currency and invest in higher-yielding assets elsewhere). As for risk, the spread on high-yield corporate bonds, compared with American government bonds, has risen from very modest to slightly less modest: from 267 basis points in late February to only 310 points on March 2nd. Admittedly, the Vix measure of American stockmarket volatility almost doubled on February 27th, to 18. But on long-term form, this is nothing special. It was above 20 even before the Russian crisis of 1998.

First liquidity, then hot air

It is here that the argument begins. For wary observers, such as this newspaper, valuations that seem out of step with historical trends (and, in America, the underlying economy) are usually ones to worry about. Optimists tend to see a more enduring state of affairs. Kevin Warsh, a governor of the Federal Reserve, spelt out the case for optimism in a speech this week. “Liquidity is confidence,” he said, before proceeding to set out what has boosted both sides of this proposed identity in the past couple of decades: financial innovation and America's strong economic performance, helped by “excess savings” from abroad in search of high returns.

There is something to this. In the recent past the number of financial markets has increased dramatically. You can buy and sell not only shares, bonds and currencies, but any number of derivatives based on them; you can trade in insurance against the default of single companies or whole bunches of them; all manner of debt, from solid company loans to fragile subprime mortgages, can be syndicated or securitised, chopped into bits and sold on; and you can bet on myriad indices of all the above and more. Never has the diversification of risk been so easy. Rarely have once-risky bets seemed so safe. When borrowing is cheap and when whomever you are lending to, or insuring against default, looks highly likely to pay you back—because the economy is booming or their house is sure to rise in value—where then is

the risk? Bets are easier to make with confidence when you know that financial innovation has made them easier to lay off again.

The question is when this strays into over-confidence. Mr Warsh was right to note that the reduced volatility of America's GDP and inflation over the past 20 years or so may well mean persistently lower risk premiums and higher asset valuations. Stability begets confidence—or, its equivalent, liquidity. However, even if the ups and downs of the economy are less marked than they used to be, they have not disappeared altogether. That, in effect, is the point Mr Greenspan has now made twice. Corporate America's profits have had a good run in recent years, but they are cyclical phenomena and the cycle is turning. Especially among financial companies, which have made piles from America's housing boom and from the wonders of financial innovation, profits growth looks set to fall.

Moreover, suppose that risk premiums should be permanently lower and asset valuations permanently higher: by how much? The honest answer is that no one knows: that is what financial markets are supposed to divine, and there is no guarantee that the business of discovery will always be smooth. What you can say is this: in part, the run-up in the prices of houses, shares and other assets does indeed reflect the belief that inflation (and hence nominal interest rates) is likely to stay low for a long while. In part, though, it is also the legacy of the loose policies of Mr Greenspan's time: liquidity is, to a degree, in the gift of central banks. In the past few days financial markets have paused for thought about the valuation of the increasingly ephemeral things in which they deal. At some point, they will surely have to think again.

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Bird in hand

Mar 8th 2007
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A lousy deal for passengers in America; but time for Europe to accept second-best

Alamy

YOU have probably been there. Your expensive long-haul flight is held up seemingly for ever. Suddenly, after hours of waiting, an alternative is on offer: you can get home, but only if you accept a different route that demands a transfer. Do you hold out for the ideal flight, or settle for second-best? That is the dilemma facing Europe's transport ministers who on March 22nd must vote on a much-delayed deal to liberalise transatlantic aviation.

Second-best would be a polite way to describe the deal provisionally struck last week between America and the European Union (see article). True, it would break open the transatlantic routes stitched up by national carriers, allowing any American or EU airline to fly to any intercontinental destination. But “open skies” it ain't. In particular, the rights of European airlines to own American ones will not change, nor will their rights to fly between American cities.

Martin Broughton, the chairman of British Airways (BA), dismissed the deal as a “con trick”. He wants European airlines to be allowed to buy and control American ones, instead of being restricted to 25% of voting shares. And he wants them to be able to pick up passengers in, say, New York on the way to the Midwest or beyond. (American carriers can already fly people around Europe, though they seldom do so.) Mr Broughton argues that to sign this deal would be to surrender the possibility of such gains for good. America is bent on protecting its weak airlines and their workers. The EU is about to give away its greatest prize without getting enough back.

Assume an upright position

In one important way, Mr Broughton is right: the best deal would open up American air travel and this falls short of that. In particular, flying inside America will remain more expensive than it should be: every time you board a domestic flight in the United States, curse the lousy carrier who is overcharging you and the lousier politicians who permit this rip-off. But that does not mean the deal is worse than no deal at all—especially once you consider transatlantic passengers.

From their perspective, the opposition of BA, Virgin Atlantic and American Airlines—which, with United Airlines, account for the biggest share of transatlantic flights—is not entirely altruistic. Even limited open skies would break the stranglehold of BA and Virgin Atlantic at London Heathrow and expose America's feather-bedded flock of airlines to more competition, at least on their transatlantic routes.

Of course, if there were a perfect deal waiting to be had, it might be tactically worth saying no to this one. In fact, there is no reason to think future negotiations will end up with a settlement that is very different from this one. Unlike past talks, Europe was this time negotiating from a position of relative strength. America used to divide and rule, picking off one-sided deals with countries eager to prop up their flag carriers. A few years ago the European Commission wrested the right to handle international aviation deals from EU governments. This, for better or worse, was the result.

And even a second-rate deal could be good for many European carriers, because it would help the European industry to restructure. Although America's internal market would remain closed, any European airline would be able to fly from anywhere in Europe to anywhere in America, as often and as cheaply as it likes. No longer would merging carriers, such as Air France and KLM, have to contort themselves in complex legal structures to preserve national flying rights. Indeed, if all rights are EU-based, the sky is the limit. It might even open the way for an easyJet, a Ryanair or whoever to attempt low-cost travel between Europe and the United States.

But in the end Europe's 27 transport ministers should be thinking about passengers, not airlines. They are the ones who suffer under today's absurdly restrictive treaties. Jacques Barrot, the EU transport commissioner, claims liberalised transatlantic flights could bring benefits worth €12 billion ($15.8 billion) thanks to more competition and investment. An exaggeration perhaps, but even a fraction of that gain is a prize not to be cast away in the vain hope of a better deal at some uncertain future date. France is hardly a source of reference on free trade, but Voltaire summed up what is needed now in European aviation: do not let the best be the enemy of the good.

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About sponsorship

America and the test-ban treaty

Just talk to yourself

Mar 8th 2007
From The Economist print edition

Given his own warhead plans, George Bush has nothing to lose from a test-ban

Claudio Munoz

HE WON'T even listen to his closest allies about it. But the actions of his own administration should tell George Bush he no longer has an excuse for avoiding doing what he said he never would: resubmitting the Comprehensive Test-Ban Treaty to the Senate for ratification. And the Senate, which in 1999 rejected the CTBT in a bitterly partisan vote, would be well advised next time to give its consent. More so than ever, the treaty is as much in America's interests as anybody's.

The official line remains, as critics of a test-ban claimed the first time round, that the treaty has two dangerous flaws. The first—that it is inherently unverifiable—is incorrect. Even the sceptical Mr Bush has continued to fund parts of the CTBT's monitoring system. Its expanding global network of sensors can pick up more than America's eyes and ears alone. Meanwhile the treaty allows for suspicions of cheating to be investigated on-site. A test-ban won't stop someone trying to build a crude fission bomb without testing, it is true; after all, that technology is now more than 60 years old. It would, however, stop them trying out new designs. North Korea's shock October test may have been an attempt to produce a smaller warhead to put on a missile.

The second alleged flaw in the treaty seems to count for more in Washington, DC: a test-ban could prevent America from ensuring the safety and reliability of its remaining nuclear stockpile (meaning ensuring that its nuclear warheads would always go off when needed, and only then). Indeed, some say such test restrictions could result over time in involuntary disarmament—something that America (like Russia, Britain, France and China) is disinclined to do.

If true, this objection would be reasonable enough—but Mr Bush's protests are belied by his actions. America has rightly kept its eagle eye on its weapons stockpile since it stopped testing in 1992. But no further nuclear tests have been needed. That is because supercomputers can figure out problems even with proven designs that had testers puzzled.

Mr Bush now wants to ask Congress for more money to carry on a proposed weapons-modernisation plan. This “reliable replacement warhead” programme could help reduce further the strategic warheads America deploys below even the 1,700-2,200 apiece by 2012 already agreed with Russia, and cut drastically stocks of “hedge” warheads kept for spares (see article). The crucial condition, insisted on by Congress all along, is that any such future weapons tinkering avoid the need for testing. The weaponeers now say they can comply. In other words, a test-ban would not stop all modernisation.

Forty-four reasons to think ahead

With testing not needed for the warheads you have or plan to update, why not ratify the CTBT? Some on Mr Bush's team oppose formal constraints on nuclear testing, come what may. Yet refusal to ratify the CTBT undermines America's non-proliferation cause: a test-ban was part of the deal that won indefinite extension of the Nuclear Non-Proliferation Treaty, which Mr Bush wants upheld. And if the ban unravels—North Korea's blast may provoke others—those likely to benefit most are those keenest to offset America's big military lead.

Senate approval alone would not bring the CTBT into force. That needs all 44 countries with nuclear reactors on their territory (and thus the potential to build bombs) to ratify. North Korea, India and Pakistan have not even signed the treaty. Seven other foot-draggers, including China, Iran, Israel and Egypt, like America, have signed but not ratified. Keeping America's testing option open makes it harder to argue that other states should abandon theirs.

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About sponsorship

On diabetes, Colombia, Iraq, Poland, money

Mar 8th 2007
From The Economist print edition

The Economist, 25 St James's Street, London SW1A 1HG
FAX: 020 7839 2968 E-MAIL: letters@economist.com

Medical advice

SIR – Your assertion that type-1 diabetes is thought to be genetic, whereas type-2 diabetes is caused by obesity and sedentary lifestyles, is wrong ("An American epidemic", February 17th). Type-1 diabetes is an auto-immune disease, where the body's anti-infection defence systems attack and destroy the insulin-producing cells in the pancreas. The genetic and environmental triggers for this disease remain obscure. While type-2 diabetes is very heterogeneous in its presentation and course, it is caused by the environmental stresses you listed, acting on multiple, increasingly well-defined, genetic pathways.

Around 90% of all people with diabetes have the type-2 disease. You would therefore be best served with the following summary: in the right genetic "environment", excess calorie intake and decreased calorific expenditure lead to type-2 diabetes mellitus. This simple statement also explains the demographic differences you noted (eg, the higher prevalence of the disease in Native Americans as compared with Anglo-Americans), and holds the promise for new therapies that compensate for the inherited deficits.

Dr Amnon Schlegel
Endocrine unit
Department of Medicine
University of California, San Francisco
San Francisco

Shining light on a scandal

SIR – Recent revelations about links between drug-running paramilitaries and politicians in Colombia are not, as your article stated, "a result" of President Álvaro Uribe's paramilitary demobilisation process ("Paramilitary politics, and other perils", February 24th). That is the spin the Uribe administration has used in the face of mounting scandals over the ties between paramilitaries and much of Mr Uribe's coalition in Congress and with his intelligence service. But it has no basis in fact.

Demobilised paramilitary bosses have so far said nothing about their links with politicians: at most, they have spoken about collaboration with already deceased military officers. Your praise should not be directed at Mr Uribe or the demobilisation process, but rather at the Colombian Supreme Court and the local media, whose courage in investigating these links is finally uncovering some of the ugly truth.

Maria McFarland
Human Rights Watch
New York

Definitions

SIR – I was slightly amused by your description of the increasing confrontation between America and Iran, which you reported to be caused in part by the latter's "meddling" in Iraq ("A countdown to confrontation", February 10th). In the interests of balanced journalism, what word would you use to describe the actions of the United States in Iraq?

Dennis Curry

Khartoum, Sudan

Politics in Poland

SIR – I strongly disagreed with the overall tone of your recent article on Poland and the unfavourable light through which you viewed the reform efforts of Lech and Jaroslaw Kaczynski, who are respectively the president and prime minister ("Turning the loose screw", February 17th). For example, you said that the effort to reform military intelligence had "created a private spy service for the Kaczynskis in its place". Let me assure you that reforms to the intelligence service have been carried out in order to make them more responsive to current needs and threats, a process which is also happening in other democratic countries.

You also said that Poland's separation of powers was held in "disregard" by the prime minister. Poland has a democratic parliament and an independent system of justice and abides by the rule of law. This separation of powers is not held in "disregard" by anyone in the country, least of all by the prime minister.

The remarks you made were not only unfair, and phrased too harshly; they overlooked the successes this government has achieved in a relatively short period of time. The reforms may have started 16 years ago, but they are no easy task; many complex and unresolved issues still remain from the past that must be dealt with.

Barbara Tuge-Erecinska
Ambassador for Poland
London

Show us the money

SIR – Your briefing on the future of money ticked off a list of problems associated with the disappearance of cash ("A cash call", February 17th). One problem you didn't itemise is the difficulty for consumers in keeping track of their payments. Reconciling electronic charges is already time-consuming, even more so when there are errors. Hollow "don't worry" bank slogans have taught me that the most effective way to stop unauthorised charges being made by companies, such as unwanted magazine subscriptions, is to report that my credit card has been lost or stolen. As more places accept plastic, and my credit-card bill has grown beyond one page, I have reverted to cash; it is safe, reliable, and far simpler than ploughing through monthly statements.

Jay Starkman
Atlanta

SIR – You seemed to support efficiency over efficacy. The enthusiasm for the cashless society overlooks the effect of privatised currencies on the state. If money is entirely digitised, the company of the future could very well begin to issue its own units of account redeemable at any affiliated business, undermining the state's territorial monopoly on money. Such transactions would circumvent standard taxation and limit the state's capacity to raise revenue and fund services.

Aaron Ettinger
Kingston, Canada

SIR – Digital "cash" still relies upon electricity. What if there were power outages, not to mention computer viruses? How would people then pay for their goods? There is still a need for cash, and it seems implausible that the infrastructure that makes digital transactions possible will be reliable enough to be completely trusted for a long time.

Joshua Nims
Waco, Texas

SIR – We object to your assertion that "Adam Smith will replace Sir Edward Elgar as the face on Britain's £20 note" ("The end of the cash era", February 17th). The note in question is issued by the Bank of England. Notes in Scotland are issued by Scottish banks and do not feature Elgar.

Lorraine Galloway et al

Queen Margaret Union Shop
University of Glasgow
Glasgow

SIR – Cash will never disappear as long as people have vices. The world's oldest profession is not going to go away, nor is the desire for anonymity among its clientele. The same can be said for someone buying illegal drugs. Cash will always be king for these kind of activities.

Tom Kus
Maywood, Illinois

SIR – With America gearing up to distribute new $1 coins, it pains me to say that the idea of a cashless society, or at least your timeline of it, is without currency.

Mark Wasylechko
New York

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Governing China

Caught between right and left, town and country

Mar 8th 2007 | BEIJING
From The Economist print edition

A new law on property rights defines the ideological struggle at the heart of China's economic reform

Imaginechina

Get article background

FOUR years of double-digit growth, soaring government revenues, low inflation and a manageable budget deficit might be cause for celebration in other countries. But China's leaders are anxious. Inequalities are growing, corruption is rampant, grumbling widespread. Ideological battles between free-marketeers and left-wingers threaten to impede reform.

In his annual address at the opening of China's parliament, the National People's Congress (NPC) on March 5th, the prime minister, Wen Jiabao, studiously avoided mention of the most controversial item on the 12-day meeting's agenda. It is a new law on property rights which is mainly intended to reassure the country's fast growing middle class that their assets are secure. Three years ago China added a clause to its constitution saying that private property was “not to be encroached upon”. But efforts to translate this into law have aroused unusually fierce and open debate about the direction of China's economic reforms. Chinese leaders are now struggling to silence it.

The debate has raised embarrassing questions about whose side Mr Wen and President Hu Jintao are really on. Do they support China's left wing, which fears the country is turning too capitalist, or the right, which sees market forces as a sometimes painful but necessary cure to developmental problems? Since Mr Hu took over as Communist Party chief in 2002, and Mr Wen as prime minister the following year, the two men have shifted official rhetoric and policy to the left and have boosted central-government support for the poor and marginalised. Last month the official media published a speech by Mr Wen on the need for “social justice”—a term dear to the left which believes that the poor are being trampled upon.

As the party prepares to hold its five-yearly congress this autumn, the first to be presided over by Mr Hu and a crucial test of his authority, the leadership's record is coming under closer scrutiny. The NPC session is focusing attention on how much has really been done for the poor under Mr Wen's premiership. Mr Wen's five-year term of office ends next year. He is all but certain to be reappointed for another term (he and Mr Hu appear to get on well), but he will want to mark the occasion by pointing out what he has achieved.

Not nearly enough say those on the left. Direct criticism of leaders is still virtually taboo in China. But the drafting of the property law has provided an outlet for critics of government policy to air their grievances. Mr Hu and Mr Wen do not appear to face concerted opposition among party officials. But a vocal body of intellectuals and retired officials has denounced the property law as a betrayal of the country's socialist principles. It will, they say, protect the fortunes of corrupt officials and the ill-gotten gains of crooked businessmen. Further, it will hasten the demise of China's remaining state-owned industries and the creation of a plutocracy.

The leadership has been put on the defensive. Although it is often ready to lash out at critics on the right, it is usually more cautious in handling the left (China is still, after all, officially socialist). In this case, the left's criticisms have been particularly difficult to suppress because the leadership itself invited discussion by publishing a draft of the law in 2005—a very unusual move in a country that normally keeps its legislative processes shrouded in secrecy.

A law professor at Peking University, Gong Xiantian, took advantage of this to write an open letter calling the proposed bill unconstitutional. His criticism was widely reported in the Chinese media and fuelled an acrimonious debate on Chinese websites. Officials revised the law and planned to have it adopted at last year's NPC meeting. But the controversy continued to rage and they were obliged to pull it from the agenda.

Since then, three more drafts have been circulated among senior legislators, the latest in December. The leadership retreated into secretive mode. Copies were not made public until after the NPC session began. Mr Gong says officials have made it clear in recent weeks that they want the law passed at this year's NPC session. Newspapers have been ordered to play the issue down. Mr Gong says he has had no choice but to turn to the foreign media in order to get his views across. Han Deqiang, another Beijing academic and critic of the bill, says officials told him to remove an online petition he had organised opposing the legislation.

But an NPC spokesman said consensus about the law had emerged and it was wrong to call it unconstitutional. Its passage on March 16th, the closing day of the NPC, is now all but secure. Opinion polls of delegates—who owe their positions to party patronage—are never published. Dissenting votes have become increasingly common in recent years. But it would be unprecedented for delegates to reject a bill.

For all its pro-left rhetoric—Mr Wen's speech to the NPC was suffused with it—the leadership realises that it also has to keep on side a growing urban middle class whose tolerance of party rule is particularly vital to its grip on power. On this, Mr Hu and Mr Wen are of one mind with their predecessors, Jiang Zemin and Deng Xiaoping. It was Mr Deng who decided in the early 1990s that only rapid growth, fuelled by the unfettering of the private sector, could save China from the fate of the Soviet block. In the final years of his presidency, Mr Jiang invested enormous political capital in promoting the abolition of the party's ban on recruiting private entrepreneurs. In 2002, when he stepped down as party general-secretary in favour of Mr Hu, Mr Jiang secured—despite strong complaints from the left—a revision to the party's charter that, in effect, legitimised his welcoming of capitalists.

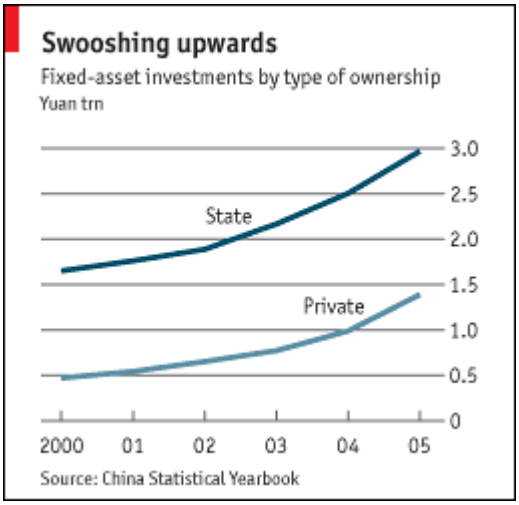
The more left-leaning approach of Mr Hu and Mr Wen has often been portrayed as evidence of a policy rift between them and Mr Jiang, who remained influential in Chinese politics until he stepped down from his last position as the party's military chief in 2004. But their efforts to please the property-owning middle class suggest they have a lot in common. The constitutional revision three years ago and recent attempts to silence opposition to the proposed property law have been central to these efforts.

Neglecting the middle class would be even more perilous for the current Chinese leadership than it was perceived to be by Mr Jiang and Mr Deng. Sweeping privatisation of housing since the late 1990s has radically changed the social and political fabric of urban China. Property rights have become a topic of critical interest to urban residents anxious to protect their new assets from the whims of the state.

They are also of vital interest to private businesses, which have continued to grow rapidly in number and scale under Mr Hu and Mr Wen. Official figures show investment by the private sector in fixed assets such as factory buildings and machinery grew nearly threefold between 2000 and 2005 (see chart). As a proportion of total fixed-assets investment the figures suggest little change (14% to 16%). But if investments by collective enterprises (many of which are private) are included in the private share, it has

risen from 42% to 60%.

Farmers, too, are finding property rights of rapidly growing interest (and their concerns matter more to the left). The large-scale appropriation of farmland in recent years for housing and factory construction has rendered millions of farmers landless. Many have been given little or no compensation. In the countryside and in the cities, property and land disputes have become a leading cause of social unrest. A senior official said in January that the number of “mass incidents” in China had fallen to about 23,000 last year from 26,000 in 2005. But such figures are ill-defined and subject to political distortion. Since 2004 leaders have vowed to build a “harmonious society”, making it risky for low-level governments to report data suggesting that unrest is growing.



The proposed law's provisions (to judge from the draft released on March 8th) range from general statements of principle to specific clarifications of certain grey areas. These include, for instance, the ownership of parking spaces around high-rise flats: the draft says that the spaces belong to the flats' owners, not the developers. China's fast-growing cohort of car-owners will be pleased with that.

Many of the law's provisions are contained in other regulations issued in recent years. But supporters of the bill say that combining these elements into one law enacted by the country's top legislature would give them additional weight. Yin Tian of Peking University says the law will be a mark of the government's respect for private property and could help to reinforce social stability by reducing disputes. The draft tries to streamline the registration of property sales and make it easier for interested parties to check details. The difficulty buyers have in getting such information results in frequent ownership wrangles after deals are completed.

Farmers, whose main concern relates to land-ownership rights, would also have something to gain. The good news is that the latest draft, unlike the 2005 version, gives farmers the right to renew their land-use leases after they expire. Unlike urban land, which is state-owned with usage rights granted for periods of between 40 and 70 years, rural land is “collectively” owned. Farmers are given 30-year leases (though often no supporting documents) to use plots of land. But the law will put no new limits on the government's powers to appropriate land. It also says that village committees represent the collective. These are supposedly democratically elected but party regulations still give unelected party chiefs the final say over village affairs. Most important, the ban on mortgaging farmland will remain.

Again according to the draft, a person would be considered the owner of real estate if his ownership was registered with the government, or of movable property if he was in possession of it. Ownership could be challenged, but critics worry that it would be difficult to do so for former state-owned assets or for land-use rights that had been sold off in shady deals. The timing of the earlier draft's publication in 2005 was bad for the bill's supporters. It followed an upsurge of debate about the frequent sale of state-owned enterprises at rock-bottom prices to their managers. In response, the government banned management buy-outs of large state enterprises. But there was also concern about its sales of strategic stakes in state-owned banks to foreign investors.

The left was irritated in 2005 and remains so. A recent petition to the NPC by influential left-wingers says privatisation is accelerating and causing a widening gap between rich and poor. It says the sale of state assets to corrupt officials, the super rich and foreign multinationals is illegal and unconstitutional. Among the more than 3,200 signatories are seven former government ministers or deputy ministers, five former provincial leaders, a sprinkling of retired senior military officers and about 50 professors at the party's Central School, an academy for top officials.

The government has tried to assuage the left by stressing the limits of reform. In December it announced that state-owned enterprises under the central government would remain in control of industrial sectors considered crucial to national security and economic welfare: military equipment, electric power, oil and petrochemicals, telecommunications, coal, aviation and shipping. But the number of centrally owned state enterprises would continue to decline from 161 at the end of last year to between 80 and 100 in 2010. Among these, the government hopes that 30-50 internationally competitive conglomerates will emerge. State-owned enterprises with no hope of turning a profit will “exit the market” by 2008. In other words, sell-offs to the non-state sector will continue.

At the NPC session, officials have continued to emphasise measures aimed at the poor. Mr Wen in his opening address said the government would “shift the focus” of state infrastructure development and the development of social programmes to the countryside, where income growth has been slower than in the cities (7.4% in real terms last year compared with 10.4% in urban areas). The aim is to develop what party leaders announced in late 2005 would be a “new socialist countryside” with subsidised health care and free schooling for all. From this year, said Mr Wen, schools would no longer charge tuition or other fees for children having their compulsory education (up to the end of junior high school). This will affect 150m families. A medical-insurance scheme, launched in 2003, is to cover 80% of rural areas by the end of this year, up from 50% at present. The aim is to have complete coverage by 2010.

But these measures, though welcome to many, hardly amount to spectacular shifts in the government's spending priorities nor are they a colossal burden. Central-government support for rural areas and agriculture is to increase by 15% to about 392 billion yuan ($51 billion) this year. This is almost the same rate as this year's predicted increase in central-government revenue (2.4 trillion yuan is the target). It is also about the same as last year's increase in the government's spending in the countryside.

The armed forces, however, get a bigger boost. The budget presented to the NPC calls for a nearly 18% increase in military spending this year to 347 billion yuan. Most analysts believe this is far less than China's true spending. The armed forces have enjoyed double-digit budget increases for most of the past 15 years. The leadership knows well whom it really needs to keep happy.

The central government has substantially increased its spending on health care, but from a very low base. This year it is forecast to rise by 87% to 31.3 billion yuan. Though it is encouraging that the central government is taking up a bigger share of health-care spending, this is still low: less than one-tenth of total government spending on the health sector last year. After four years in office Mr Wen has yet to announce any ideas for addressing one of the public's biggest concerns, namely the prohibitive cost of medical treatment for many urban and rural residents. Hospitals have been trying to generate revenues by pushing up medicine prices, over-prescribing drugs or recommending unnecessary procedures. Mr Wen was able to say only that the government had “begun formulating a plan”.

Even the health-insurance scheme in the countryside is not all it is cracked up to be. The programme requires contributions from peasants and provincial governments as well as the central government. The peasant has to pay only a dollar or two a year. But he still has to pay a considerable proportion of expenses for hospital treatment. Wealthier peasants may welcome the subsidy, but for poorer ones having to pay even a reduced share of hospital expenses still makes treatment unaffordable. The “new socialist countryside” campaign has its critics too. Mr Wen may not be to blame, but some village officials have used the campaign as an excuse to order the demolition of old houses and require villagers to borrow money to pay for new ones.

The central government is spending more on education: 54 billion yuan last year, an increase of more than 39%. This too will be welcome. Next to soaring housing costs (which Mr Wen pledged to keep at a “reasonable level” this year, without explaining his secret), education expenses are among the biggest complaints of urban residents. But the government remains way off the target set in the mid-1980s (when leftists enjoyed far more clout) of pushing education spending by central and local governments to 4% of GDP by the year 2000. Last year total spending increased by nearly 20% to 475 billion yuan, but this was less than 2.3% of GDP—“significantly lower” than the international average, according to a UN report in 2005.

Far from using its fast-rising revenues (let alone issuing more debt) to finance pro-poor programmes, the government has stressed its goal of further reducing the central budget deficit. Last year this amounted to 275 billion yuan, a fairly healthy-sounding 1.3% of GDP. The plan is to cut it by another 30 billion yuan this year. “We can never start spending money hand over fist just because revenue has been relatively good recently,” said a budget report submitted to the NPC.

A bit more equal than others

Mr Wen and Mr Hu may have swung to the left in their words, but they have kept the party's doors wide open to capitalists. In 2005 the party recruited 1,512 private-business owners, an increase of 170% over the previous year, according to a recent publication by the Chinese Academy of Social Sciences. The government's desire to keep all constituencies happy—but the middle class a bit more so than others—is reflected in the property- rights bill. Mr Gong says the drafters have added provisions on the protection of state property. But he dismisses these changes as superficial. “It would be a very shameful page in

China's history” if the law is passed, he says. He is appealing for it to be delayed again. But Mr Hu and Mr Wen seem unenthused by their party's ideological baggage.

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The Libby trial

The fall guy falls

Mar 8th 2007 | WASHINGTON, DC
From The Economist print edition

Reuters

Scooter Libby's conviction spells awful times for the Republicans, and for Dick Cheney in particular

ANY number of leading Republicans have been damaged by the Iraq war. The president and vice-president, George Bush and Dick Cheney, will go down in history as the architects of a botched war of choice. Donald Rumsfeld was sacked amid widespread speculation that he was the worst defence secretary in American history. Colin Powell is reportedly tortured over his role, when secretary of state, in enabling the war to happen—particularly his performance before the United Nations. John Bolton failed to win confirmation as America's UN ambassador.

But nobody has been as personally damaged as Lewis “Scooter” Libby. In 2003 Mr Libby, chief of staff to the all-powerful vice-president, was known as “Cheney's Cheney”. Then came a few revealing telephone calls with reporters about Valerie Plame, a CIA operative who happened to be married to Joseph Wilson, a pesky critic of the administration.

Mr Libby has spent the past three years undergoing slow legal torture. On March 6th he was found guilty on two counts of perjury, one count of obstructing justice and one count of making false statements. This makes him the highest-ranking White House official to be convicted of a crime since the Iran-contra affair in the late 1980s. Prolonging the agony, he must wait until June for his sentence.

The jury took no pleasure in its work. Denis Collins, a jury member who once worked for the *Washington Post*, said he and his colleagues had felt that the whole thing was unfair. Why weren't Mr Cheney or Karl Rove, Mr Bush's senior political adviser, in the dock? The jury had no doubt that Mr Libby was technically guilty. But he looked like a fall guy in the bigger scheme of things. “We wish we weren't judging Libby,” he said. “This sucks.”

The reaction to the verdict split along predictable lines. The right was outraged. The *Wall Street Journal* dubbed the case a “travesty of justice” and urged the president to pardon Mr Libby. Conservatives pointed out that he had not committed the initial crime: the man who had originally leaked Ms Plame's name to the media was Richard Armitage, a deputy secretary at the State Department and a behind-the-scenes critic of the war.

The left, for its part, tried to turn the Libby verdict into a judgment on the whole administration. Harry Reid, the Senate majority leader, said that someone was at last being held accountable for the “campaign to manipulate intelligence and discredit war critics”. Nancy Pelosi, the House speaker, said that the “trial provided a troubling picture of the inner workings of the Bush administration.” Chuck

Schumer, a New York senator, argued, like the jury member, that Mr Libby was the fall guy for his boss, Mr Cheney.

The conviction of his right-hand man was yet another blow to the once mighty vice-president. The Libby affair put a “cloud” over him, said Patrick Fitzgerald, the prosecutor. It demoralised a White House team that liked and admired Mr Libby. And it was personally painful to Mr Cheney, who had once started his days riding to work with his chief of staff.

Mr Cheney is also seeing his influence over foreign policy wane as Condoleezza Rice, the secretary of state, adopts a softer approach to Iran and North Korea. (Would America be sitting down with Iran if Mr Libby were still in his post and Mr Rumsfeld were still in the Pentagon?) On top of everything, the vice-president is becoming more and more of a target for congressional Democrats. The Libby verdict greatly increases the chances that he will be asked to testify to Congress about pre-war intelligence.

All this comes at a difficult time for the Bush administration. The president faces a formidable array of problems both at home and abroad—from a Democratic Congress to Iran's suspected nuclear ambitions—and Mr Libby's conviction further erodes his political capital. It reinforces the belief that the “Bushies” manipulated pre-war intelligence. It is one thing for left-wing activists to talk about Mr Bush lying his way to war, quite another for a jury to pronounce a guilty verdict on a senior official. And it emboldens a Democratic opposition armed with subpoena powers.

The verdict also reinforces the general impression that the Bush administration is a fading force. Most people now have little trust in the administration to tell the truth or lead the country in the right direction. In a new ABC News/*Washington Post* poll, 63% of Americans say that they cannot trust the Bush administration to report intelligence about possible threats from other countries “honestly and accurately”. An Associated Press/Ipsos poll found that 68% thought that the country was on the wrong track, compared with just 28% who think it is going the right way.

A Gallup poll also found that people seem to be abandoning the Republicans for the Democrats. Democrats and Democratic-leaners lead Republicans and Republican-leaners in national polls by ten points, the biggest lead since 1991. They are also ahead in 33 states; the Republicans lead in six, with the others toss-ups.

Mr Bush was due to set off for a tour of Latin America this week, leaving behind a chorus of voices calling on him to pardon Mr Libby. The choice is not an easy one. The president is well known for being loyal to his troops. But pardoning Mr Libby could strengthen the impression that the administration refuses to take responsibility for the Iraq mess.

The president is no fan of travel, let alone abroad. He likes to sleep in his own bed with his own pillow. But at the moment he is probably better off anywhere other than Washington.

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The military health-care scandal

Broken Reed

Mar 8th 2007 | WASHINGTON, DC
From The Economist print edition

Prominent heads have been removed, but what about the red tape?

INSIDE the steel fence that surrounds the Walter Reed Army Medical Centre are some grisly sights. A pile of amputated limbs sits glistening in the sunlight. Surgeons prepare to operate with unwashed hands and filthy instruments, virtually ensuring infection. These are not scenes from the hospital itself, of course, but exhibits in the museum of military medicine in its grounds. Visitors are reminded that the current scandal over conditions at Walter Reed is hardly unprecedented.

Reuters

Iraq was only the start of his problems

Walter Reed is America's foremost military hospital. Nearly four-fifths of the soldiers who have needed amputations after serving in Iraq or Afghanistan have been treated there. The surgery they receive is, by all accounts, superb. But the bureaucracy that engulfs them afterwards is not.

Last month the *Washington Post* published an exposé. It described a building housing outpatients: “Signs of neglect are everywhere: mouse droppings, belly-up cockroaches, stained carpets, cheap mattresses.” Wounded soldiers needing to get their papers processed, so they could return either to active duty or civilian life, faced 16 different information systems, few able to communicate with each other. One amputee received orders to report to a base in Germany “as he sat drooling in his wheelchair in a haze of medication”.

The report sparked outrage. Both George Weightman, the head of Walter Reed, and Francis Harvey, the secretary of the army, were sacked. Both arms of Congress held hearings. On March 5th the House oversight committee heard testimony from John Shannon, an infantry sergeant who was shot in the head near the Saddam Mosque in Ramadi, causing brain trauma and the loss of an eye. Wearing a patch over the empty socket, Sergeant Shannon told how he was discharged from a ward at Walter Reed and told to make his own way to an outpatient building while utterly disorientated. He spoke of a bureaucracy so inept that his case manager could not find him for several weeks, although he was sitting in the outpatient room where he had been sent. He said he had seen “many soldiers get so frustrated with the process that they will sign anything presented [to] them just so they can get on with their lives.” He suggested that this was how the government reduced the cost of caring for veterans.

President George Bush promised action. He has appointed a bipartisan commission to investigate the

military health-care system, to be headed by Bob Dole, a former Republican presidential nominee and veteran of the second world war, and Donna Shalala, who was health secretary under Bill Clinton. Meanwhile, politicians of both parties sought to score points. “This is the Katrina of 2007,” said Chuck Schumer, a Democratic senator, evoking the government's poor response to the hurricane that flooded New Orleans in 2005. Conservatives pointed to Walter Reed as a sign of what government-controlled health care would be like.

The truth is more complicated. Wars are unpredictable, and military medical systems often struggle to cope. Among the surprises thrown up by the Iraq war, two have aggravated the problems at Walter Reed. First, the war has lasted much longer than expected. Second, American body armour and battlefield medicine are now so good that some 90% of wounded soldiers survive. In Vietnam, the figure was 76%. During the American civil war, most soldiers with injuries died of them.

Both factors have contributed to a higher-than-expected tally of wounded Americans—24,000 so far in Iraq and Afghanistan. Many of these need long-term care. Many suffer lost limbs or mental problems. Their armoured cars and Kevlar vests prevent the shrapnel from roadside bombs from killing them, but the blast still buffets their brains. Two-thirds of all injuries are from bombs, and of these some 28% involve brain trauma, according to the Department of Defence.

Lack of money is not the problem. The Department of Defence's health budget has grown from $19 billion a year to $38 billion under Mr Bush. The Veterans Administration, which provides health care for veterans who lack insurance, spends nearly as much. Both systems have their strengths, says Daniel Johnson, a former military doctor and now health-policy analyst at the Heritage Foundation, a conservative think-tank. But their computers cannot speak to each other, and they offer far less choice than, for example, the much-admired health plan for civilian federal employees. He says he hopes the scandal will spur overdue reforms.

In past conflicts that has often happened. During the civil war, the scandal of wounded soldiers left lying for days on the battlefield prompted the creation of an efficient evacuation system. The second world war spurred the mass-production of penicillin. In 2002 the army introduced high-tech bandages with coagulants to stop wounds bleeding. Walter Reed itself does sterling research into telemedicine and vaccines. The question is, can it also learn to do the boring stuff well?

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The trade agenda in Congress

Raising the bar

Mar 8th 2007 | WASHINGTON, DC
From The Economist print edition

Some Democratic troublemakers will never be satisfied

WHEN the Democrats won control of Congress in November, free-traders expected George Bush's trade agenda to die. Free-trade deals already signed with Peru, Colombia and Panama would wither. Trade-promotion authority, the negotiating mandate necessary for the White House to conclude trade deals, would expire on June 30th and would not be renewed. At issue was only how much protectionist damage would be done.

Yet this pessimism has proved premature. Several Democrats in charge of trade, particularly Charles Rangel, the chairman of the House Ways and Means Committee, seem genuinely keen to keep the trade agenda going. As a first step, Mr Rangel wants to get the Latin American trade deals passed. The Bush team, too, has proved surprisingly open to compromise. Publicly, the remarks are conciliatory. Privately, a flurry of talks is going on.

At issue is how labour standards should be defined and enforced. Democrats have long complained that trade agreements do too little for workers. They now want an enforceable commitment to the core standards of the International Labour Organisation, which include prohibitions on child and prison labour as well as the right to form unions, written into all bilateral agreements.

The Bush administration is reluctant formally to reopen trade deals that have already been signed. It also argues that an enforceable commitment to ILO standards would leave America vulnerable to legal attack. Gary Hufbauer, of the Peterson Institute for International Economics, points out that many aspects of American labour law are technically inconsistent with ILO standards. The ILO, for instance, forbids governments from punishing striking workers. But American employers are allowed to hire permanent replacements.

To prevent trade deals becoming a back-door route to rewriting American laws, Mr Bush's trade team suggests that the free-trade deals require countries either to comply with the ILO standards or to pass labour laws that are equivalent to America's. For the unions and their friends on the Democratic left, that will not do. Sander Levin, head of the trade-subcommittee in the House, this week flatly rejected the Bush team's suggestions.

These machinations are exposing several truths about Democratic trade policy. First, for all the talk about helping workers in poor countries, the unions' focus on enforceable ILO standards has more to do with trying to change American law. Second, no compromise will satisfy the party's left. American trade policy depends on whether Mr Rangel is brave enough to vote to proceed regardless.

The real losers from this wrangling are Latin American workers. As Mr Bush visits the region this week to repair a damaged relationship, his promises will ring hollow if the free-trade deals wither. Colombia's president, Álvaro Uribe, points out that Congress's failure to approve the free-trade deals would have “a very negative impact” both economically and politically. “Nobody in the region would understand” America's about-face. Sadly, for all their crocodile tears, too many Democrats couldn't give a damn.

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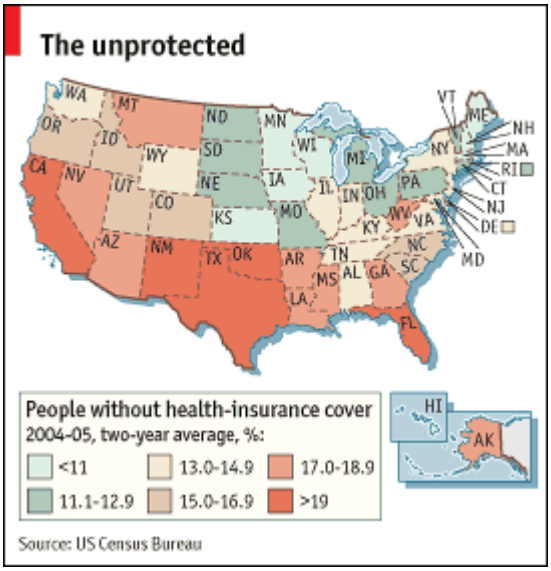
Health care

Tax the wicked, cure the sick

Mar 8th 2007 | CHICAGO
From The Economist print edition

Another governor aims for universal health care



IN 2005 the Democratic governor of Illinois, Rod Blagojevich, showed that expanding health-insurance coverage at the state level could be a popular policy. His All Kids programme made health insurance universal for Illinois children by filling in gaps between private and government-backed schemes. The idea caught on. Pennsylvania and Tennessee have also announced plans to insure more children; and other governors, starting with Mitt Romney in Massachusetts, have gone even further by aiming to cover everyone in their states, not just youngsters. Not to be outdone, back in Illinois Mr Blagojevich this week unveiled a new health-insurance overhaul, supported by some controversial new taxes.

Universal coverage in Massachusetts was relatively easy; few people were uninsured to begin with. But other governors face tougher trade-offs if they want to insure everyone. In Texas, one in four people lacks health coverage. In the biggest state, Arnold Schwarzenegger's universal scheme will need to cope with the 19% of Californians who currently go uninsured. Illinois is more typical: with 14% uninsured, it is roughly in the middle of the pack (see map).

Mr Blagojevich's plan has many elements that other governors are trying. It would make private health insurers offer a low-cost plan that anyone could join. It would compel everyone to buy some kind of insurance, either on their own or through their employer, as a way to hold the system's costs in check. And it would give subsidies to help those with low incomes pay their premiums. A poor family of four, for example, would pay only $2,250 out of their own pockets for insurance, dramatically less than it would cost now. The plan would also try to cajole small firms into joining the state-sponsored insurance option.

Passing the tax increases that Mr Blagojevich needs to pay for it will be hard. He says, optimistically, that the scheme will cost $2.1 billion a year. The governor also faces a public-pensions crunch and wants lots of money for schools. So on March 7th he proposed two new taxes to the legislature in Springfield, along with a hefty new bond issue and a plan to lease the state lottery. He asked for a 3% payroll tax on employers that do not offer health insurance; and he wants to replace the corporate income tax with a much larger tax on businesses' gross receipts—in effect, the revenues they earn on goods and services. His fellow Democrats control both chambers, but even some of them might balk.

The governor points out that these business taxes do not technically violate his pledge, during last autumn's re-election campaign, to avoid raising sales or income taxes. Yet Illinois workers would ultimately bear much of the cost, through some combination of higher prices for goods and services and lower demand for their labour.

Mr Blagojevich tried to blunt the inevitable criticism by using two of George Bush's favourite strategies: pre-emption and religion. On March 4th, three days before taking his budget and tax plans to state lawmakers, the governor announced his health-care plan in front of a Chicago church. Across the state other congregations demonstrated loudly in favour, using horns and bells—they called it “sounding the alarm”. The faith-based angle was fitting. Mr Blagojevich wants to insure the multitudes—and it will miraculously cost them nothing.

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California's schools

Villaraigosa's frustration

Mar 8th 2007 | LOS ANGELES
From The Economist print edition

Packing a school board with allies is harder than it seems

LAST week Antonio Villaraigosa, the mayor of Los Angeles, took journalists to visit a high school in a gang-ridden area. As the mayor's bus drew to a halt, a pupil at the school, who was supposed to symbolise plucky dedication to learning in a tough place, scrawled a graffito on the side. Mr Villaraigosa is having a miserable time with the city's schools. Compared with the treatment he has received from education officials, the teachers' unions and, this week, voters in school board elections, the hooded youth was almost respectful.

AP

Now, kids, just put the mayor down...

California's schools were once among America's best. In the past three decades, though, they have been hobbled by anti-tax measures, powerful teachers' unions and state bureaucracy. In 2005 California's 14-year-olds came joint 44th among the 50 states in mathematics tests, tying with West Virginia. In reading they ranked 49th.

For Mr Villaraigosa, whose city contains some of the state's worst schools, this is both a problem and an opportunity. Rudolph Giuliani, a former mayor of New York, is running strongly in the presidential race thanks largely to his competent response to two crises: a sky-high murder rate and the terrorist attacks of September 2001. What criminals and terrorists did for Mr Giuliani's career, dismal schools could do for Mr Villaraigosa's. But only if he can work out how to improve them.

The mayor at first proposed to take control of the entire Los Angeles school system, following the lead of Michael Bloomberg in New York and Richard Daley in Chicago. That plan was rewritten until it was acceptable to the teachers' unions. Last year the state assembly gave Mr Villaraigosa some power over three high schools and the 30-odd elementary and middle schools that feed them. In a district that serves some 708,000 pupils, it hardly qualified as a power grab. But it was still too much for the Los Angeles school board, which successfully sued to stop the mayor. The matter is now in the hands of lawyers.

Mr Villaraigosa then tried to pack the school board with allies. A committee controlled by the mayor poured money into three races for the seven-strong board on March 6th, with the unions spending almost as heavily on the other side. The result was frustrating for the mayor. A strong supporter was crushed and surprisingly effective campaigns by union allies forced two run-offs, set for May. Even if both Mr Villaraigosa's candidates prevail, the reformers will have a majority of just one.

As the mayor's plans gather dust, there are encouraging signs of progress elsewhere. Los Angeles has

some 100 charter schools, which are paid for by the state but more or less independent of it. They practise many of the things that Mr Villaraigosa has said he wants for the whole system, such as longer school days, smaller classes and more powerful principals. Despite opposition from the teachers' unions and the school board, they are growing in number.

So far the charter schools have posted test results that are hardly, if at all, better than those of ordinary schools. But as William Ouchi, who follows school reform at UCLA, points out, they have introduced much-needed competition into the school district. Black parents in the poorest parts of Los Angeles are queuing to send their children (and thus, indirectly, state cash) to the new schools. To counter that, the district announced in January that it would allow “autonomous” schools to open: less independent than the charter schools, but more independent than the norm.

So Los Angeles's schools are changing. But reform is coming much too slowly to boost Mr Villaraigosa's political career. He needs to look for another battle.

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Texas toll roads

Miles to go

Mar 8th 2007 | AUSTIN
From The Economist print edition

Should Texans have to pay to drive?

TEXANS are addicted to aggressive driving. They have made an art form of tailgating, honking and weaving across clogged interstate-highway lanes. Plenty more of this sort of behaviour on the roads lies ahead. By 2030 the state's population is projected to rise by at least 40%, with most growth occurring in the big cities.

Toll roads are the answer, the state has decreed. In the past few months drivers have begun paying to use roads north of Austin. More will open later this year. Other free highways in central Texas could also be converted to tollways, including a popular route to the airport in Austin.

Some tollways are seen as necessary, but not too many. In 2004 one Texan, irked at the prospective tolling of a bridge near his house, founded the Texas Toll Party, which urges people to vote against toll roads. In February a Texas legislator introduced a bill to stop building on all new toll roads planned by the state Department of Transportation until September 2009. “People are frustrated and angry,” says Kirk Watson, a former mayor of Austin, now a state senator. Other bills, including one from Mr Watson, are also circulating.

Critics claim there is something unTexan about these “Lexus highways” (as the chief executive of the American Trucking Associations has dubbed them). But toll-road supporters insist that this is the best way to meet the needs of a fast-growing state. At the moment highways are funded by a motor-fuels (ie, petrol) tax of 20 cents a gallon; a federal motor-fuels tax; and vehicle registration fees. The state petrol tax does not rise with inflation and has not increased since 1991. Just try raising such a tax in the heart of oil country.

An even bigger issue looms. Governor Rick Perry's pet project is the Trans-Texas Corridor, running more than 300 miles (480km) from Dallas to San Antonio, more or less parallel to existing, often-congested Interstate 35. Cars choosing to avoid the interstate could run on tollways. Unlike the recently opened tollways near Austin (which were financed mainly by bonds), these would be operated by private companies. A consortium led by Cintra, a Spanish company, is preparing plans. It is giving Texas $1.2 billion up front for the privilege of developing the corridor, in which it plans to invest $6 billion.

The drone against foreign companies has reached a predictable pitch. An animated YouTube video, prepared before last November's election and now visited more than 33,000 times, warns against allowing moneybag-laden Mr Perry to hand over Texan infrastructure to “foreign robber barons”. The real issue, says Mr Watson, is the tollways' potential effect on existing state roads. Private operators' contracts with the state could include non-compete clauses—or penalties against the state for making improvements to non-toll highways, such as adding lanes. As public roads suffer, more people would be forced onto tollways. Operators, wanting to recoup their investment, could boost prices considerably. The alternatives are a rise in the petrol tax, or eternal congestion.

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Reliably replacing warheads

Newer and fewer

Mar 8th 2007
From The Economist print edition

But Congress may still have doubts about modernising America's bombs

WHEN George Bush first took office, he said he wanted to reduce the size of America's stockpile of nuclear warheads to the lowest number consistent with America's security and that of its allies. But since then Mr Bush has attracted controversy, rather than committed arms-controllers, to his cause. On March 2nd the National Nuclear Security Administration, the bit of the Energy Department that looks after America's bombs, announced the winner of a competition between weapons laboratories to design a “reliable replacement warhead” (RRW). If Congress gives the nod and the money, development could get under way next year. But why build more bombs if you want fewer of them? And what will all this mean for America's vast weapons complex?

It was Congress that first nudged the administration to explore the RRW idea. It had earlier scotched plans to develop a nuclear bunker-buster, fearing that the weapon would require testing and prove all too tempting to use. The aim of the RRW, by contrast, is not to develop a new nuclear weapon. All along, Congress has laid down the clear condition that it must avoid the need for testing too.

The design chosen was put forward by the Lawrence Livermore National Laboratory in California. It is based on a weapon that has already been tested but was never added to the stockpile. Some of its insides—not the explosive core—will be adapted to make it cheaper and easier to build, using less toxic materials (the old cold-war imperative to get the biggest bang for the smallest weight, so that multiple warheads could be mounted on each missile, drove scientists to push materials to the limit). Meanwhile the Livermore design, it has been decided, will also make use of elements of a rival bid by Los Alamos in New Mexico. These include mechanisms to reduce the likelihood that a stolen weapon could ever be put to terrorist use.

The administration's RRW-boosters argue that making nuclear warheads safer, cheaper and easier to build will also allow the “hedge” of thousands of nuclear warheads now held in reserve and for spares to be chopped drastically. But that also depends, in part, on a second element of the administration's plans: the consolidation of weapons-making facilities into a more modern, streamlined and responsive “complex 2030”, including new facilities to churn out “pits”—plutonium cores for bombs—at a faster clip, should they be needed to meet some unforeseen threat. Although building simpler and safer warheads may be done more cheaply, the saving will be far outweighed by the investment needed for such a reorganisation.

A big question also hangs over the future of Los Alamos, the loser in the RRW competition. It has long been argued that having two rival labs keeps the weaponeers on their toes—witness the somewhat hybrid result of the RRW competition. But scientists are no longer quite so sure about that. Los Alamos has had persistent problems of management and internal security that have lowered morale and led to something of a brain drain. Meanwhile a significant number of its nuclear scientists are heading for retirement.

Even though Congress helped kick-start the RRW effort, it may have other reservations. A recent report discovered that the plutonium triggers of weapons deteriorate more slowly than had been feared, reducing the urgency of modernisation. And the labs have other ways to extend the life of existing weapons.

Keen to avoid the impression that their modernisation plans could spark a new arms race, administration officials point out that Russia, China, Britain and France all have their own modernisation efforts planned or under way. Meanwhile the dismantling of old warheads, as part of a treaty commitment with Russia to reduce each side's stockpile to no more than 1,700-2,200 deployed strategic weapons by 2012, is being speeded up. But Congress will not let itself be rushed.

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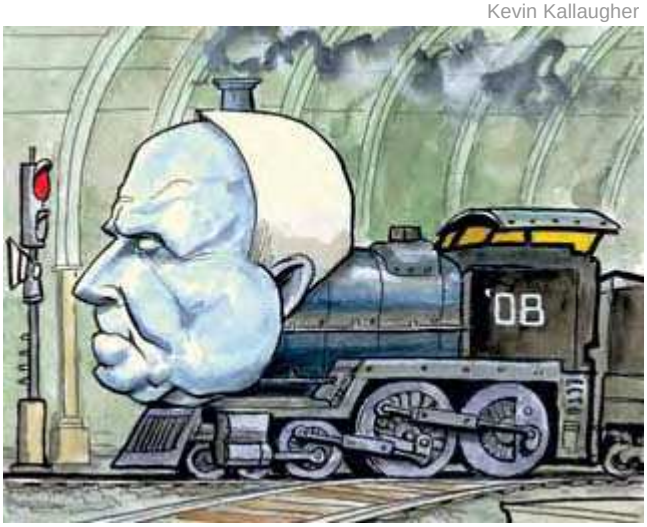
Lexington

Slow train coming

Mar 8th 2007
From The Economist print edition

Kevin Kallaugher



John McCain is a more powerful presidential candidate than he currently appears

THE last time he ran for president John McCain spent months rolling around New Hampshire in a bus, the Straight Talk Express. This time he has swapped the bus for a giant locomotive. He has hired high-price political consultants, some from the Bush entourage, tapped into a network of rich donors and established operations across the country. Yet the locomotive remains stubbornly stuck in the station.

Mr McCain is trailing Rudy Giuliani by as much as 25 points. His attempt to build bridges with the right has alienated his former friends in the centre without converting conservatives. And he seems to be dogged by bad luck—his recent announcement that he is going to run, for example, was marred by his faux pas about American lives being “wasted” in Iraq.

Why is the McCain express still immobile? The most important reason is the senator's outspoken support for George Bush's decision to send five more brigades to Iraq. This has not only put him on the wrong side of an unpopular war (two-thirds of the population oppose the “surge”); it has also strengthened the impression that he is speaking for the White House.

The other reason is his botched transformation from maverick to establishment figure. Mr McCain tried to turn himself into the inevitable Republican champion by mending fences with all the people he had upset in the past—from the Bush camp to the religious right to conservative activists. This made sense after his failure of 2000 (remember the old adage that Democrats like to fall in love while Republicans like to fall in line). But it is proving hard to pull off, with independents accusing him of pandering and conservatives still nursing their old wounds.

It would be a mistake, however, to think that Mr McCain will be static for ever. Mr Giuliani is a flawed front-runner. He has huge strengths as the architect of New York's turnaround and as the hero of September 11th 2001, to be sure. But he has equally huge weaknesses. His private life is tangled (his relationship with his son, Andrew, is so strained that he did not even turn up to his graduation). His business affairs are more tangled still. He has a foul temper and a mean streak as wide as the Hudson river. “Absolutely not,” was the response of Ed Koch, another former New York mayor and a political rival, to the suggestion that Mr Giuliani is a racist. “He's nasty to everybody.”

Mr Giuliani also seems unprepared for a national campaign. Last week George Will introduced him to the

annual meeting of CPAC—a gathering of more than 6,000 red-meat activists—by saying that conservatism comes in many flavours, with Mr Giuliani the Thatcherite one. A nice point. But the former mayor then delivered a meandering speech that left the audience dispirited. His campaign may collapse as quickly as it inflated.

The Giuliani bubble is as much a proof of the weakness of the other anti-McCain candidates as it is a long-term threat to Mr McCain himself. The strongest competition to Mr McCain arguably came from Mitt Romney rather than Mr Giuliani (the rest of the candidates are midgets compared with the big three). Mr Romney has a long record of managerial competence—a huge selling point after George Bush's serial incompetences. He is also an efficient politician: his speech at CPAC was as smooth as Mr Giuliani's was ragged.

But the failure of the Romney campaign to catch fire is good news for Mr McCain. Mr Romney's Mormonism is proving more of a problem than many people expected: a quarter of Americans claim that they would not vote for a Mormon. But what is really damaging him is his opportunistic flip-flopping over abortion and gay marriage. If he is willing to pander on these issues as a candidate, might he not pander as president?

Conservative activists might warm to Mr McCain if they took another look at him. It is true that he has quarrelled with conservative pressure groups. But that is often because he sees them as obstacles to achieving conservative ends, such as a balanced budget or clean politics. It is true that Mr McCain refused to endorse the Federal Marriage Amendment. But he did so for the eminently conservative reason that these sorts of issues should be decided by the states rather than the federal government. It is true that Mr McCain has pushed for more federal funding for stem-cell research. But he has also been more consistently conservative on abortion than any of the other first-tier candidates.

Conservatism's best hope

Mr McCain has a rare ability to present conservative ideas in a language that moderates and independents can find appealing. He also has a rare ability to break with the conservative establishment on subjects where they are obviously batting on a losing wicket, such as global warming. This could make him the best candidate for reviving conservatism from its current dismal state—and also the best candidate for keeping conservatism alive in a Washington where the Democrats rule Capitol Hill.

Mr McCain has also often been right about the war. He was one of the first major politicians to call for Donald Rumsfeld's resignation. He repeatedly criticised George Bush's tolerance of torture as a stain on America's good name. Even his support for Mr Bush's “surge” may not be as much of a liability as it appears. The bulk of Republican primary voters are in favour of giving the war one last chance; and Mr McCain's willingness to risk his political career over Iraq burnishes his tarnished reputation as a straight-talker.

His biggest weakness has to do with age rather than ideology. He will be 72 if he is elected to the White House, and his face is visibly scarred from bouts with skin cancer. But he has the energy and attitude of a much younger man, and seems to absorb energy from his audience. And he also boasts the most impressive biography in American politics. The McCain Express will not stay stuck in the station for ever.

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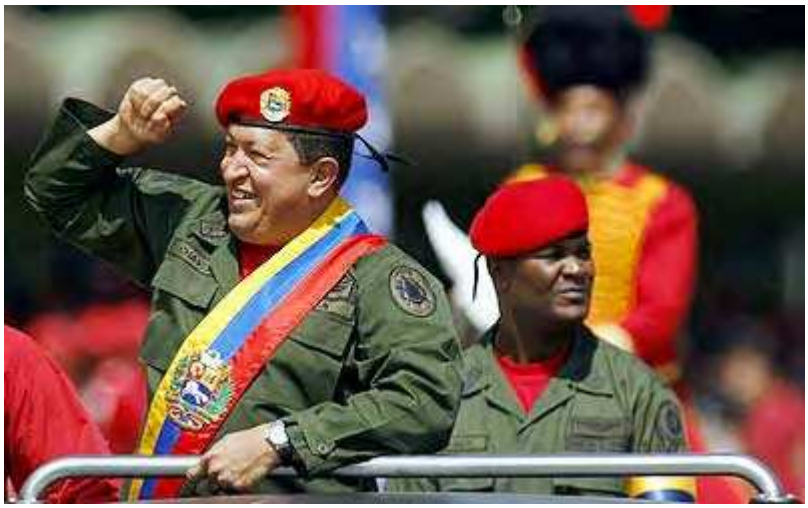
Venezuela

Rumbles in the revolutionary ranks

Mar 8th 2007 | CARACAS
From The Economist print edition

Hugo Chávez's move to leftist autocracy faces some unexpected opposition from some of his own supporters

Reuters



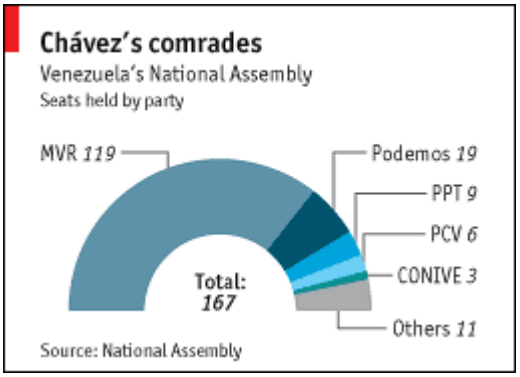
SINCE he won a further six-year term in a presidential election last December, Hugo Chávez has had his foot firmly on the accelerator of his “Bolivarian revolution”. He has promised sweeping constitutional changes, including indefinite re-election; nationalised “strategic” industries; and instituted rule by decree. He is also pressing forward with plans to gather together his disparate supporters into a single revolutionary organisation.

Now he has hit his first speed bump since the election. It is over the new party, provisionally called the United Socialist Party of Venezuela, whose leader will of course be Mr Chávez himself. The largest *chavista* party, the Fifth Republic Movement (MVR), has already agreed to disband. So have others, including the smaller UPV. “My *comandante* gives the order—we obey,” said its leader, Lina Ron, without irony. “Who am I to question the second Liberator of the Republic, the messiah God sent to save the people?”

But at separate meetings this month, three of the more important among the score of parties that support the president declined, at least for now, to join the new outfit. Ismael García, the leader of Podemos, said his party stood for “democratic socialism” and favoured a grass-roots debate about the new party. “It's very bad to have just one form of thought,” added Ramón Martínez, a Podemos state governor, in a reference to the militaristic command structure favoured by Mr Chávez, a former army officer. Motherland for All (PPT) and the Venezuelan Communist Party (PCV) also demurred, saying they awaited details of the new party, its platform and statutes.

Eleazar Díaz Rangel, a newspaper editor sympathetic to the government, calls this the *chavista* movement's “worst internal crisis”. But it is not the first difficulty Mr Chávez has faced in organising political backing for a revolution whose linchpins are his own personality, the army and oil money. The MVR is a ragbag of factions whose only principle has been unquestioned support for its leader. Podemos, the PPT and the PCV are older parties (or descend from them), with some ideas of their own, ranging from old-fashioned Marxism-Leninism to democratic socialism. Between them they hold a fifth of the seats in the National Assembly—a purely *chavista* body since the opposition boycotted a legislative election in 2005 (see chart).

Mr Chávez has always detested parties. He sees them, with some justification, as mere vehicles for the ambitions of potential rivals. “Those who don't want to accompany me are free to pursue their own path,” he said in December. “Their ministers will leave the government. I want a single party to govern with me.” To those who argued that they had contributed votes to his election victory he responded, “Don't deceive yourselves—those votes belong to Chávez.” Some 800,000 of his 7.3m votes came via the Podemos ticket. Another 600,000 were cast for the PPT.



Mr Chávez has fewer problems with the military wing of his revolution. After eight years in power, he has a tight grip on the barracks. The armed forces are to gain the prefix “Bolivarian”—a reference both to Simón Bolívar, South America's independence hero, and to the president's own movement. In defiance of a constitutional ban on “political militancy” in the armed forces, Mr Chávez is using them to promote his “21st century socialism”. Generals are now heard to proclaim “socialism or death!” Army cadets are among the “brigades” of young people sent out to preach the new socialist gospel.

Mr Chávez is still very popular, especially with the poor: he won 63% of the vote in December. But there is less enthusiasm for his new radical programme. “His leadership is based more on the social and human dimension, and not on the ideological ingredients,” says Oscar Schemel, a pollster. “In focus groups, people say, ‘Why didn't he tell us before the elections he was going to do all this?’” Mr Schemel's latest survey found that only 41% rated Mr Chávez's performance as “good” to “excellent”, down from 49% in November.

Even many *chavistas* are wary of the ever-greater power wielded by their president. Indefinite re-election is opposed by over 60% of respondents in his poll, according to Mr Schemel. Some of the president's academic sympathisers are expressing alarm. The new party is being set up “without debate, without consultation, and...in arrogant terms,” argues Margarita López Maya, a historian.

There is no sign that the president's leadership is under serious threat. Manuel Rosales, who won 37% for the opposition in December, has since lost popularity. Mr Chávez can afford, for now, to brush aside the challenge posed by his reluctant allies—though he stressed that the door remains open for them to join the new party in the future. The bigger question is how far down the revolutionary road Venezuelans as a whole will be prepared to travel with their president.

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Gay rights in Latin America

Out of the closet

Mar 8th 2007 | LIMA
From The Economist print edition

And into politics

LATIN AMERICANS are surprisingly tolerant of homosexuality—within limits. Though they may face taunts and violence, men in particular can sometimes lead openly, even flamboyantly, gay lives as long as they conform to certain stereotypes (such as working as hairdressers). Those who prefer to be discreet usually benefit from Catholic society's widespread “don't ask, don't tell” tolerance of private foibles. It is when they start challenging norms and agitating for legal rights that the trouble typically starts.

Now, this too is gradually changing. In January two lesbians became the first same-sex couple to register a “civil solidarity union” in Coahuila, the first Mexican state to legalise such partnerships. This month Mexico City will follow suit. Buenos Aires, Argentina's capital, and the southern Brazilian state of Rio Grande do Sul also allow same-sex unions.

AP

Giving the kiss-off to machismo

Argentina and Costa Rica too are considering giving legal recognition to same-sex unions. Last month Colombia's Constitutional Court granted gay couples who have lived together for more than two years the same inheritance rights as married heterosexuals. A bill to give them the same social-security rights is pending in Colombia's Congress.

The beginnings of a shift are visible in more conservative countries as well. In 2004 Peru's Constitutional Court struck down a law that banned members of the armed forces from having homosexual relations, whether on or off base, while the police's human-rights manual instructs officers not to mistreat gays, lesbians or transvestites. A Peruvian activist, Jorge Bracamonte, ran for a seat in the Andean Parliament last year, not so much to win (he didn't) but in order to campaign against homophobia. Even in Chile, where divorce has been legal only since 2004, a gay-rights group has begun lobbying politicians to legislate against discrimination.

Such legal changes would have been unthinkable in the region a decade ago. Abortion remains illegal in many Latin American countries. However, gays who campaign for change still face prejudice, and worse. The International Lesbian and Gay Association, a Brussels-based NGO, reported that in 2005 a gay man was killed every two days in Latin America solely because of his sexuality. In Brazil, whose government launched a campaign against homophobia in 2004, 2,509 gay men have been murdered over the past decade.

“Countries that have made the most progress, such as Brazil and Mexico, also have the highest levels of hate crimes,” says Mr Bracamonte, a historian. The more they come out of the closet, the easier targets gay people become. In January an immigration judge in the United States who had previously denied a Mexican gay man's asylum bid, on the ground that he could conceal his sexual orientation and was therefore not in danger of persecution as a homosexual, reversed his decision.

Same-sex unions face powerful opposition from conservative political parties and the Catholic church. Because of that, campaigners have so far pushed only for civil unions, not marriage. But across the region, gay groups are slowly becoming part of the political scene.

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Mexico

His own man

Mar 8th 2007 | MEXICO CITY
From The Economist print edition

A mayor gets tough on crime

IN TEPITO, an endless, densely packed street-market just north of the centre of Mexico City, just about anything can be bought, if you know the right people and have enough cash. The stalls are loaded with television sets and clothes imported from China. Pirated DVDs abound, with copies of children's shows incongruously placed next to pornographic films, both the polished California versions and those shot surreptitiously in Mexican hotel rooms. Alongside the sordidness and “The Simpsons” there are drugs: Tepito is the capital's main entrepot for cocaine and marijuana.

Since taking office on December 1st Mexico's new president, Felipe Calderón, has launched a crackdown on the drug trade and the violence it generates. He has sent troops to border cities, such as Tijuana, and to remote mountains. Now, not to be outdone, the newly elected mayor of Mexico City, Marcelo Ebrard, is taking on Tepito.

Last month he sent 600 police on a pre-dawn raid to evict residents from 73 apartments in a building in Tepito's heart said to be a drug-dealing centre. Rather than drugs, the police found and confiscated 3,600 pirate DVDs. The building will be razed to make way for a community centre and the residents rehoused. A further raid nearby netted two kilos of cocaine, 90 kilos of marijuana and 30 tonnes of DVDs. Police have placed 20 checkpoints around Tepito and will set up a 400-man police station there, according to Joel Ortega, the city's public-security secretary.

All this is unlikely to dent the trade in drugs and DVDs but, like Mr Calderón's actions, it does send a message that government is taking the rule of law more seriously, according to Jorge Chabat, a political scientist at CIDE, a Mexico City university.

Under the previous mayor, Andrés Manuel López Obrador, Tepito was tolerated in return for its financial contributions to his (and Mr Ebrard's) centre-left Party of the Democratic Revolution. Some in the PRD look askance at the new mayor's actions. But many others want quietly to distance themselves from Mr Lopéz Obrador, whose refusal to accept defeat by Mr Calderón in the presidential election did his party little good. Perhaps the loudest message from Tepito is that Mr Ebrard is his own man.

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Canada

Barrier-busting

Mar 8th 2007 | VANCOUVER
From The Economist print edition

Free trade comes to the Rockies

ITS thriving economy owes much to the North American Free-Trade Agreement with the United States and Mexico, and it is negotiating similar deals with other countries. But Canada's commitment to free trade has not applied inside its own borders. Business chafes at the manifold non-tariff barriers that hinder trade among the country's ten provinces and three territories. Now, at last, comes an effort to knock down some of these walls.

On April 1st a Trade, Investment and Labour Mobility Agreement will come into effect between British Columbia and Alberta. This is supposed to eliminate almost all barriers to the free flow of trade, investment and labour between Canada's westernmost provinces.

Governments can still pursue differing tax and labour policies. But businesses will need to register only in one province, rather than in both as before. Investment and government-procurement rules will be standardised, no longer favouring local businesses. Skilled workers will be able to work on both sides of the Rocky Mountains without having to take new courses. When the agreement is fully implemented in two years' time (following further negotiations), many regulations will be reconciled and needless ones scrapped. No longer, for example, will farmers trucking hay across the provincial border have to restack their loads to comply with an arcane transport rule.

The agreement, reached after three years of talks, is the result of “mutual frustration” with the lack of progress towards countrywide free trade, says Colin Hansen, British Columbia's minister of economic development. Talks on that have drifted along for 12 years—even though their aim is only to eliminate internal trade barriers “to the extent possible”.

Some economists say this balkanisation of the economy is a big reason for Canada's sluggish productivity growth. There are perhaps 500 separate trade impediments, ranging from regulatory fine print to outright protectionism, such as Quebec's ban on margarine coloured to look like butter. These barriers cost the equivalent of 1% of GDP, according to the Fraser Institute, a pro-business think-tank.

The governments of British Columbia and Alberta are more fervent than those of most other provinces in their commitment to an open, competitive economy. Not wholly coincidentally, they make up Canada's fastest-growing region (though high prices for their commodity exports have played a big part in that). Between them, their 7.7m people and GDP of C$400 billion will make up Canada's second-biggest economic unit after Ontario.

The Conservative federal government is keen on eliminating internal barriers to trade and labour mobility. Jim Flaherty, the finance minister, said in November that he wanted to speed up talks on this. But maybe the impetus will come not from Ottawa but from the west: Saskatchewan, Manitoba and Ontario are all wondering whether to join Alberta and British Columbia's pioneering effort.

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Argentina

An open door

Mar 8th 2007 | BUENOS AIRES
From The Economist print edition

Reviving a history of immigration

RESIDENTS of Buenos Aires love to hear their city called the “Paris of the South”, but its national immigration office, tucked behind railway tracks near the city centre, looks like La Paz on the River Plate. On a weekday morning, the queue to photocopy documents is made up mainly of people of Andean Indian appearance. Most have endured bus journeys lasting several days. A sign outside proclaims: “In today's Argentina, only those who want to be undocumented will be.” Despite the grumbles of some in the queue, the government of President Néstor Kirchner is welcoming immigrants with open arms.

Argentina's constitution still instructs the government “to promote European immigration”. That dried up half a century ago. Nowadays, educated young Argentines are migrating to Europe and the United States. They are being replaced by unskilled Paraguayans and Bolivians.

In 2003 Mr Kirchner's government approved a law that lifted almost all restrictions on immigration from South America and guaranteed access to public health and education to all migrants, including illegals. Last year, the government launched an ambitious plan to register all undocumented immigrants and grant them formal residency. Although obstacles remain, Argentina issued some 350,000 residence visas in 2006—eight times the 2005 total.

One aim is to encourage migrants, two-thirds of whom work in the informal economy, to pay taxes in return for legal protection. There is also a more idealistic motivation: officials say that freedom of movement is central to South American integration.

Bolivians and Peruvians face some discrimination in Argentina. But there is not yet a backlash against the policy. Most of the immigrants work in unskilled jobs, as maids or busboys, that few Argentines covet. The government's policy of keeping the peso artificially cheap means that wages in dollars are low, checking the inflow. This may change. Although Mr Kirchner is proud that unemployment has fallen from 20% to 10% since he became president in 2003, those who remain jobless lack education and skills. Wages are rising sharply in pesos, and also in dollars.

In the 1990s, when the peso was fixed at par to the dollar, foreigners flooded in, prompting the government to restrict migration. Mr Kirchner's officials insist that they will stick to their liberal approach. “This is a country with a lot of land, most of which is unpopulated,” says Ricardo Rodríguez, the immigration director. *Gobernar es poblar*—“to govern is to populate”—was how Juan Bautista Alberdi, whose writings inspired the 1853 constitution, put it. But the populators are now Latin Americans.

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Correction: mining in Bolivia

Mar 8th 2007
From The Economist print edition

In our story about mining in Bolivia ("Tin soldiers," February 17th), we referred to the sale of assets by Comsur, a company owned by Gonzalo Sánchez de Lozada, the country's former president, to Glencore. We quoted a source as saying that a side-letter required Comsur to repay Glencore in the case of nationalisation of the assets. This information was false. We apologise for this mistake.

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Japan's prime minister

Scarcely an Abe-rration

Mar 8th 2007 | TOKYO
From The Economist print edition

AFP

The prime minister's latest—and most offensive—gaffe is all too typical

Japan's politics

THE gossip-mill is grinding away, and the man whose career could soon pop out the other end in fragments is none other than Shinzo Abe. When he was elected leader of the Liberal Democratic Party (LDP), and hence as Japan's prime minister, last September he won by a landslide, and was hailed as a youthful (52), electorally savvy representative of a new political generation, and, moreover, as one likely to carry on the reform programme associated with his charismatic predecessor, Junichiro Koizumi. Mr Abe began in spectacular fashion, visiting Beijing and Seoul during his first days in office and thus warming up relations that had become damagingly frosty under Mr Koizumi. Since then, however, the only spectacular feature has been his decline.

That decline may explain why on March 1st Mr Abe chose to undo much of what he had achieved through his October visits to Beijing and Seoul, by publicly denying one of the many Chinese and Korean grievances: that Japan's Imperial Army forced hundreds of thousands of women, mostly Chinese and Korean, into prostitution during the 1930s and 1940s.

Not all of those euphemistically termed “comfort women” were enslaved: some were already prostitutes, and others had been sold into bondage by their families. But many say they were kidnapped, enslaved and raped. Their testimony, plus documents unearthed in military archives, forced the Japanese government in 1993 to acknowledge responsibility. Now Mr Abe has said that there is no “historical proof” that coercion was involved. In other words, that the women are liars.

This revealed Mr Abe's true colours, as a conservative politician who has long taken a revisionist view of Japan's 20th-century history. The statement was prompted by an effort by fellow LDP conservatives to force a bill through the Diet (parliament) overturning the government's 1993 statement (which the Diet never ratified). They were responding to moves in America's Congress to condemn Japan over the sex-slavery issue. A strong prime minister might have resisted taking a position on such a sensitive matter. Mr Abe, however, is desperate to shore up his party base.

After his groundbreaking visits to China and South Korea last October, and no doubt helped by North Korea's nuclear test the very day he left Beijing, the new prime minister's approval rating was in the high

70s. Now it has slumped below 40%. That is far from disastrous, by the low standards of the ten forgettable prime ministers Japan endured between 1987 and 2001. But it is poor by the standards of the starry Mr Koizumi, who took office in that year and remained popular for most of his five-year term. And it is dangerous for two bigger reasons: there are local elections for prefectural governors and city mayors in April, and a critical set of elections for parliament's Upper House in July, in which the government's majority could be at stake; and there is a mood for revenge among the many older Liberal Democrats who feel Mr Abe leapfrogged them to gain the leadership last September.

The Japanese public has turned against Mr Abe not because of foreign policy or historical debates but for economic reasons. For all the government's boasts that Japan is enjoying its longest period of growth since 1945, the Japanese are not feeling much benefit in their purses and wallets. The boast is true only if you ignore deflation, and while ordinary Japanese like falling prices, they do not like the fact that their incomes have risen only slowly—as much because of longer hours worked as because of higher wages. In nominal terms (ie, not adjusted for price changes), Japanese output remains below that of 1997. Recent economic growth has produced record company profits, but a tight labour market has not seen wages rise much. In this respect, things were no better under Mr Koizumi, but at least he seemed to be doing something about it by shaking things up. By comparison, Mr Abe looks clueless.

Dreaming of Lionheart

Actually, his problem is subtler than mere cluelessness. He is torn between dealing with the politically potent topic of inequality—in an ageing Japan, the income gap is widening—and making further reforms to encourage future growth. The only thing he has done so far has made both problems worse, however: his government clamped down on the interest rates chargeable by consumer-finance companies on loans to Japan's poorest borrowers. This looked popular, but some say it has choked off their borrowing and helped to depress consumer spending.

Worse still, when he has had a political clue it has led him in the wrong direction. Mr Koizumi pulled off the remarkable trick of attacking his own political party, eventually kicking out LDP Diet members when they rebelled against his flagship programme of postal privatisation. That laid the ground for his triumph in the 2005 general election. Mr Abe, keen to curry favour with his party's old guard, has now readmitted 11 of the rebels. At a stroke, that has changed his public odour from breath of fresh air to the usual LDP halitosis.

Whether he will actually be dumped, however, depends on how badly the LDP fares in the July Upper House elections. Fortunately for Mr Abe, the opposition Democratic Party of Japan is also in disarray, with its leader, Ichiro Ozawa, in poor health and at war with his own colleagues. Yet that may not save Mr Abe, such is the mood against him. Strange stories have been circulating about how cabinet ministers have so little respect for him that they do not bother to stand up when he enters the room. The rival most often mentioned as his budding successor is Taro Aso, the bumptious foreign minister, who is also a conservative and currently cuts a more dashing figure than his boss.

Another name, though, is increasingly being whispered: Junichiro Koizumi. There is no real prospect of tempting him back, at least not yet, for the great man is said to be having far too much fun as Japan's most eligible bachelor. But how he is missed.

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Cambodia

Invasion of the land-grabbers

Mar 8th 2007 | KOMPONG SPEU PROVINCE
From The Economist print edition

Small farmers lose their livelihoods to corrupt officials

ONE day in December, 70-year-old Doung Moeurn and her neighbours arrived to work on their rice paddies to find soldiers putting up a barbed-wire fence around them. As in China, across Cambodia growing numbers of small farmers and slum-dwellers have fallen victim to land-grabbing.

The country's rapid economic growth in recent years has meant that land, having hitherto been almost worthless, is now a fast-appreciating asset. Almost any Cambodian with a bit of spare cash is taking a speculative punt, snapping up a chunk of land in the hope of easy profits. Small farmers, and poor people living in shacks in the towns and cities, usually have no proof that they own their land or homes. This makes it easy for the speculators—often politicians, civil servants or army brass—to work the corrupt legal system to take the ground from under their feet.

Public anger over land grabs has risen to the point where the prime minister, Hun Sen, an elected strongman, is having to distance himself from those among the upper ranks of his Cambodian People's Party who are the worst culprits. On March 5th Mr Hun Sen publicly rebuked them for ruining the party's reputation, and gave them a “last chance” to abandon their dodgy land deals or be sacked. An unnamed army general was being demoted for disobeying this order, he said. Others, he thundered in his typically no-nonsense style, may face an even worse fate: “I really don't want bloodshed, but if you still fail to obey me, blood must flow.”

Doung Moeurn says her family had been farming their patch of earth, in the rural province of Kompong Speu, since 1979. They have complained to the authorities, but so far to no avail. As they point out the offending fence and the guard-post with dozing soldiers at one corner of it, the head of a nearby village, whose people also lost land, turns up. He says he went to the provincial court the previous day but was told it could do nothing to help.

Roth Thawy, from the local office of ADHOC, a human-rights group, says the villagers' case was one of 33 land-grabbing complaints received from across Kompong Speu last year. Mr Roth Thawy said he went to the nearby army base to find out why its soldiers had fenced off the villagers' land. A senior officer told him it was needed for unspecified military purposes. Some of his troops, however, said they had heard the land was being sold on to a businessman. Sometimes, say ADHOC's campaigners, farmers do get compensation, but usually only a pittance.

Cambodia is recovering slowly from the chaos left by the communist Khmer Rouge regime of 1975-79 and the civil war that followed its collapse. A 1989 law allows those who occupy land for at least five years to claim ownership. But so far only a small fraction of the millions of rural households entitled to claim the deeds to their land have actually received them.

The World Bank is helping the government to speed up the issuing of deeds, but it worries that landlessness is still getting worse. About a fifth of rural households now have no land, it reckons, while much land, snapped up by speculators, sits idle. Land-grabbing is only part of the problem: other causes include population growth and the increasing demand for land for industry and large-scale plantations. Even those small farmers still in possession of their land are reluctant to put time and money into improving it. This means that agricultural output is lower—and poverty higher—than they should be.

Land-grabbing cases are popping up all over the country, even at Boeng Kak lake, right behind the government's information ministry in the capital, Phnom Penh. Over 4,000 families face eviction from their lakeside shacks by developers who have signed a deal with the municipality to drain the lake and build over it. Whatever the 1989 law says, the ill-educated poor are usually defeated by the well-connected rich in any legal battle.

Will Mr Hun Sen keep his promise to rein in his land-grabbing apparatchiks? ADHOC's national leader, Thun Saray, is sceptical: he says the prime minister often promises big reforms but fails to deliver. In other countries with land conflicts—Brazil is a prime example—powerful landless peasants' movements can whip up big, angry protests that force the government to act. Cambodia does not have one of these: at least, not yet.

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Bangladesh

One begum down

Mar 8th 2007 | DHAKA
From The Economist print edition

The generals show who's boss

TWENTY-SIX years after the assassination of her husband, General Ziaur Rahman, a former president of Bangladesh, the political career of Khaleda Zia, prime minister until last October, has come to an end. Bangladesh's army, the moving force behind a state of emergency declared in January, is finally baring its teeth. As it promised from the outset, but at first failed to prove, its anti-corruption drive will spare no one. On March 8th it arrested Tarique Rahman, Mrs Zia's son. In recent weeks there were rumours that Mrs Zia, leader of the Bangladesh Nationalist Party (BNP) and one of the "two begums" who have dominated politics, had been trying to negotiate a graceful exit for herself and her two sons. The generals, it now seems, are not open for negotiation.

For good measure, it searched the house of the other begum, Sheikh Hasina Wajed, also a former prime minister and leader of the other big party, the Awami League. But no arrests were made. The military-backed government also published a list of 50 top businessmen and leaders from the two big parties who it wants to arrest. Perhaps most important, the administration has announced plans to create a National Security Council—in effect an admission by the army's top brass that it has become impossible to govern the country from behind the curtain any longer.

Reuters

Goodbye, ten per cent

Mr Rahman, a senior BNP official, and long Mrs Zia's presumed successor, had in recent years become the symbol in the public mind of kleptocratic rule and the politics of violent retaliation. Most Bangladeshis preferred not to mention him by name, out of fear. Instead they dubbed him "Mr Ten Per Cent"—a reference to his alleged cut on almost any deal done by his mother's government. But the culture of fear is waning. The BNP, the party his mother inherited from his father, is desperately fighting for its survival.

Fear of a possible backlash by BNP loyalists is one reason behind the creation of a National Security Council. It suggests that the army feels that the fiction it has been maintaining—that it is merely helping a civilian administration hold elections—has become unsustainable. The council will include the chiefs of the three branches of the armed forces. To give the arrangement a more acceptable gloss, it will also bring in civilians, and will be led by the head of the interim government, Fakhruddin Ahmed, a former World Bank official.

The "advisers" who have made up Mr Ahmed's administration, which is now in effect defunct, have been hopelessly overstretched. Some have responsibility for no fewer than five ministries. The new council gives the army a formal mechanism for bossing the administration it installed in January. It replaced a supposedly neutral caretaker government that, under Bangladesh's fraught two-party system, normally takes over for three months at the end of a government's five-year term to oversee fair elections. This one had provoked violent protests from League supporters, who accused it of planning to rig the election due in January. The state of emergency meant the poll has been postponed indefinitely.

Dhaka is now in an excited state. The military-backed administration still enjoys widespread public support from a public disillusioned with the corruption and eternal feuding of the big parties. But hopes of a Bangladeshi "velvet revolution", facilitated by the military, are beginning to fade as the realisation dawns that engineering the army's return to the barracks will be difficult. With most of the former political class now behind bars, the withdrawal of the army from politics and a lifting of the state of emergency would carry the risk of retribution. A total of about 30 former ministers, politicians, businessmen and civil servants are already in prison on charges of corruption. This week a court extended for a further month their detention without charge.

The current army chief, General Moeen U. Ahmed, is likely to be safe from retribution at least until his scheduled retirement in June 2008. The summer monsoon pushes the local elections—likely to be held before parliamentary elections as a test—to the final quarter of 2008 and national polls into early 2009. With the BNP decapitated, there is a political void. One candidate to fill it is Muhammad Yunus, a Nobel-prize-winning microcredit pioneer. But his attempt to build a new political force probably needs the army's backing, which Mr Yunus will want to avoid. Meanwhile, Western governments and donors are happy with emergency arrangements. Like many Bangladeshis, they say a period of 12-18 months would be acceptable. Both foreigners and Bangladeshis might have to learn a little more patience.

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Nepal's ethnic politics

The new battlefront

Mar 8th 2007 | JANAKPUR
From The Economist print edition

Rivalries between caste and ethnic groups threaten the peace process

IN THE benign view of many Nepalis, their country's 100 or so ethnic and caste groups have co-existed for centuries in remarkable peace and harmony. A new crop of ethnically-based groups, however, see things very differently. For them, the history of Nepal is one of remarkably successful and sustained discrimination. As the country of 28m people edges towards a solution to ten years of Maoist insurgency, these ancient cracks are being exposed.

Since the beginning of the year, a succession of previously little-known organisations have vied to bring Nepal to a standstill. First came the Madhesi movement, some half a dozen competing groups claiming to represent Nepalis from the southern plains, known as the Terai. At least 30 people died in three weeks of violent protests, mostly shot by the police.

In Janakpur, one of the worst affected areas, locals are angry, but sense historic change in the offing. A radio producer compares the mood to that of being weighed down by a boulder on the head and unable to stand up. “Then she throws it off. That's the Madhesi movement.”

Next to take to the streets was the Nepal Federation of Indigenous Nationalities, claiming to represent various peoples from the Himalayan foothills, which began its own series of crippling strikes. Several other ethnic identities have been invoked and the noise is likely to grow.

These groups want an end to domination by the two highest Hindu castes—Brahmins (the priestly caste) and Chhetris (warriors), who make up about 28% of the population. These castes have controlled the country since it was unified in the 18th century. Power has often changed hands between them, and seems to be doing so again. Street protests last April toppled an essentially Chhetri royal government. Now, a coalition government of Brahmin-dominated political parties is negotiating with Maoist rebels, who have exploited caste and ethnic grievances, but are themselves largely led by Brahmins.

Peace hinges on elections, due in June, to an assembly set up to write a new constitution. There is much talk of creating a “new Nepal”. Yet many groups fear the Maoists will simply slip in at the top of the existing power structure while other interests are ignored again. A piece of ethnic propaganda shows two images of the Maoist leader, known as Prachanda. In one he eats beef—a taboo for Hindus—like an atheist rebel. In the next he drinks cow urine, like an orthodox Brahmin.

The various ethnic groups present similar, though vague, demands for proportional representation in the elections and an ethnic-federalist structure in the new constitution. The government and the Maoists have

conceded both demands, though equally vaguely. Meanwhile promised negotiations with the agitators have not materialised. Doubting the government's sincerity, the ethnic groups are continuing their strikes and protests.

The benefits of federalism and proportional representation are widely recognised, but hard to deliver. According to Krishna Khanal of Kathmandu's Tribhuvan University, Nepal's ethnic and caste groups are so many and so scattered that among the dozen or so states a federal Nepal might include it is only possible to create three with a clear identity.

Lok Raj Baral, a political scientist, says that in a system of proportional representation some of the Brahmin politicians on whom the parties depend must lose out. But the agitators hold some important advantages—especially the Madhesis, who live in an economically important area and control supply routes to the capital.

There can be no election until their grievances, and those of others, have been tackled. Already it seems certain that the June deadline for the poll will be missed, undermining the peace process. The uncertainty gives greater influence to minor players, such as the Madhesi separatist guerrilla leader known as Jwala Singh, who is at present in hiding. Like many of the new breed, Mr Singh is a former Maoist. He accuses his former comrades of not taking a clear stand on Madhesi rights. Mr Singh has the armed strength to scare people and order killings but, in an interview, he implied that he would drop his separatist demands in exchange for recognition and a seat at the table. Two other violent Madhesi groups have recently emerged. They, too, seem to see a chance to spoil the peace process or wring concessions from the government.

The biggest losers from the rise of ethnic politics are the Maoists. They have seen ethnic supporters who backed them during the conflict drift away as they draw closer to national power. They have responded by attacking their Madhesi rivals.

In daily thuggery the Maoists show that, ceasefire or not, they still rely on violence. They have set the example for the new batch of politicians. That makes it even harder to achieve a feat not tried since 1999, but essential if Nepal is to move on from the bloody decline of the past ten years: holding elections that are both peaceful and inclusive.

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Indonesian transport

Safety first?

Mar 8th 2007 | JAKARTA
From The Economist print edition

A disastrous few months

WHEN a Garuda Indonesia airliner crashed and burst into flames at Yogyakarta airport in central Java on March 7th it naturally saddened the nation. Of the 133 people on board, 22 were killed. But, whatever the cause of the accident, few people were surprised by it. It was the third airliner to crash in Indonesia this year. There have also been two big ferry disasters—one sinking and one fire—since December. And every six days, Indonesia's railways suffer an “incident”—a derailing, level-crossing collision or head-on crash.

After an Adam Air aeroplane plummeted into the sea on January 1st with 103 people onboard, Susilo Bambang Yudhoyono, Indonesia's president, ordered an independent review of the nation's transport system. After the second ferry disaster, in which 42 people were killed, the three senior civil servants in the transport ministry were dismissed. A week later, after another Adam Air aeroplane buckled on landing, the government said it would halve the maximum age for commercial passenger aircraft from 20 years to ten.

Such steps have done little to ease safety concerns. The domestic airline industry has soared from half a dozen carriers in 1998 to 23 by the end of 2006. Another 14 have licences to start operations. Annual passenger numbers have risen from 6m to 34m in the same period. Most new entrants brand themselves low-cost carriers. But experts say many have cut fares without improving efficiency. Managers deny it, but many suspect safety and maintenance standards suffer. Last year several Adam Air pilots took legal action against the company alleging breaches of regulations.

Hatta Rajasa, the transport minister, claims that flying is actually safer than it was a decade ago relative to the number of aircraft. But according to the Indonesian Transport Society, a think-tank, the number of safety inspectors has risen by only 10% since 2001. It also points out that an airline's safety record is not a criterion for renewal of its licence. Nor is the maintenance of airports and air-traffic control systems keeping pace with the industry's expansion.

Mr Rajasa believes standards across the whole industry will improve after three transport bills become law, probably this year. But as with so many aspects of life in Indonesia, there are plenty of decent laws. Until enforcement is seen to be improving, many people will feel flying around Indonesia is travelling on a wing and a prayer.

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Israel and the Arabs

Let's meet, maybe

Mar 8th 2007
From The Economist print edition

Plans for a peace conference on Palestine may founder on the question of refugees

AFP

AFTER his terrible, swift routing of the Iraqi army in 1991, the first President Bush celebrated his eviction of Saddam Hussein from Kuwait by convening an Arab-Israeli peace conference in Madrid. In 2003, soon after Bush the younger finished the business by sending an army to occupy Iraq itself, a thousand editorialists implored him to follow his father's example and turn his attention sharply to peacemaking in Palestine. He declined. But is it possible that he, or at any rate his secretary of state, may be listening now?

Maybe. Seasoned Middle East watchers in Washington and London say that Condoleezza Rice, having been lukewarm for years, has lately caught peace fever in a big way. In recent weeks she and her officials have been talking to allies about the possibility of convening some sort of international "event" (diplomats on all sides recoil from the phrase "peace conference") to break the impasse between Israel and the Palestinians. There is already broad agreement not only about who would attend such a meeting but also on a document that might serve as its basic text.

That document is not new. It is the "Arab Peace Initiative", a plan inspired by Saudi Arabia's King (then Crown Prince) Abdullah, and adopted by all 22 members of the Arab League in Beirut in 2002. The plan offered Israel peace and normal relations in return for its leaving the territories occupied in 1967 and accepting a "just" settlement for the Palestinian refugees. At the time, the plan made little impression on an Israel fixated on the Palestinian *intifada*, which was then at its murderous height: on the previous day a Hamas suicide-bomber had killed 29 elderly Israelis at a Passover supper in a hotel. American interest, as Mr Bush laid his plans to shock and awe Iraq, was tepid too.

The fact that this old plan is being dusted down now testifies to the reversal of Mr Bush's fortunes since he invaded Iraq. With that country in chaos and Iran's influence on the rise, the United States is casting about for allies to buttress a weakening position in the Middle East. Since last summer's war between Israel and Hizbullah in Lebanon, just such an alliance appears to have emerged in the shape of an "Arab Quartet" of Saudi Arabia, Egypt, Jordan and the United Arab Emirates, all pro-Western Sunni states no less keen than America to counter a menacing Iran.

If Ms Rice's eye has a gleam it is because these countries may be willing to take part in a meeting with Israel and the Palestinian president, Mahmoud Abbas (without recognising Israel, Hamas need not apply). Also present could be the members of the other Quartet, comprising the European Union, the UN

and Russia as well as the United States, that has been steering Palestinian peacemaking in no very obvious direction for the past several years.

Nobody expects such an international jamboree briskly to end a conflict that has poisoned the Levant for a century. But it could at least be an event of high symbolism, allowing the big powers and the Arab states to show that they have not abandoned the Palestinians, while reviving the belief of Palestinians and Israelis alike in the possibility of a negotiated peace.

There is, however, a sticking point. Israel's foreign minister, Tzipi Livni, seems relatively (and, in the view of domestic critics, madly) relaxed about the reference in the Arab Initiative to the borders of 1967. It is assumed that when borders are negotiated, there will be give and take, just as there was in the talks Bill Clinton presided over at Camp David in 2000.

But she is less relaxed about the refugees. The Arab League document refers to the UN General Assembly Resolution 194 of 1948, suggesting that the Palestinians who fled their homes in the war of that year should be allowed to choose between return and compensation. Israel is adamant that letting the refugees back into Israel “proper” (ie, within the pre-1967 borders) would swamp the Jewish state, so their right of return should therefore be exercised only in the new state of Palestine that will supposedly arise next door.

Ms Livni hopes the Arab League will amend this language when it convenes in Saudi Arabia on March 28th. Israel, says her spokesman, is happy for the Arabs to call for a “just” solution for the refugees as long as that solution is the state of Palestine. The Saudi king and King Abdullah of Jordan may be keen to move; the Jordanian monarch put his case for urgency directly to America's Congress this week. But many Arabs will resist the idea of tampering with their 2002 initiative at the behest of a foreign country, especially Israel. Not for the first time, a chance for diplomacy may be killed by a choice of phrase.

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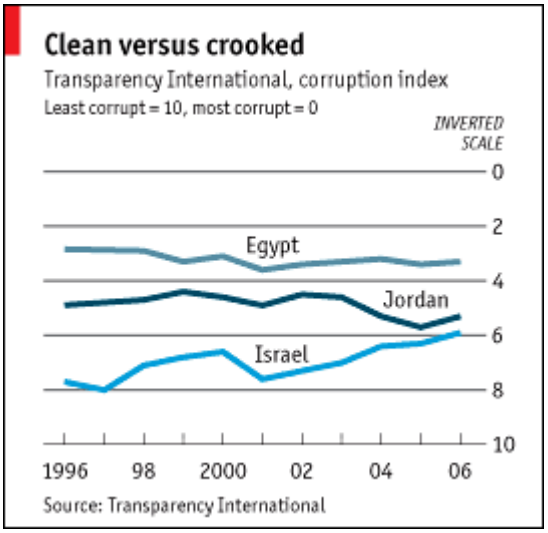
Israel

Bad smells and fresh air

Mar 8th 2007 | JERUSALEM
From The Economist print edition

Corruption in Israel has been growing, but more is being done about it too



REMEMBER those speeded-up films of fruit rotting that used to be so popular? Watching Israeli politics today feels eerily similar. Israelis had had quite enough with a series of corruption scandals involving the prime minister, finance minister and head of the tax authority, and sexual allegations against the president and the then minister of justice. But in the past few weeks their police chief resigned after a report on his mishandling of a criminal probe; a scandal instantly flowered around the appointment of his successor, who had been acquitted of corruption in the 1990s but admitted to disciplinary infractions; a new document surfaced detailing political favours granted by the prime minister, Ehud Olmert, when he was in a previous post; and a newly appointed tourism minister unwillingly stepped down after it emerged that she had lied about her academic qualifications.

Add this to a trickle of well-remembered scandals of recent years, such as the campaign-finance and bribery allegations that persistently swirled around the family of the previous prime minister, Ariel Sharon, and it is no surprise that Israel has steadily been slipping in the annual perceptions index maintained by Transparency International, a Berlin-based anti-corruption watchdog (see chart above). Some misty-eyed commentators hark back to the honest days of the 1970s, when the revelation that his wife held a few thousand dollars in a then-illegal overseas bank account was enough to make the prime minister, Yitzhak Rabin, resign. But is the putrefaction really worsening or are more people just noticing the smell?

Many think it is a bit of both. Yitzhak Zamir, a retired Supreme Court judge who recently headed a commission to draft tougher ethical rules for members of parliament, argues that as Israel has become less ideological, idealist and egalitarian than in its pioneering early days, politics has become more of a personal career and politicians abuse their positions more often. But at the same time, he says, once-sacred cows such as the army and the presidency are now under scrutiny, institutions like the courts and the state comptroller have grown stronger, and the public is “no longer willing to excuse leaders for improper behaviour”.

That is true not only of political but also of personal misdeeds. Among young Israeli women who have worked for them, philandering and harassment by many male politicians have long been an open secret. Now, however, they are more willing to go to the police with the complaints and more likely to be taken seriously.

There is also more noise about corruption than before. The current state comptroller, Micha Lindenstrauss, is not only an energetic sleuth, but less publicity-shy than his predecessors. This week he was under criticism for trying to put out an interim report on last summer's war in Lebanon, in what some see as an attempt to trump the commission of inquiry into the war that is due to report later this month.

Nonetheless, says Mr Zamir, the corruption needs to be fought “before Israel gets to the level of Latin America”. Among his commission's recommendations are giving the parliament's ethics committee powers to impose fines on miscreant legislators or bar them from certain jobs like committee chairmanships; forcing them to reveal when they have been approached by lobbyists; and further

limiting the posts they can hold outside parliament while serving in it. All of these, he proudly points out, would leave Israeli legislators in some respects more constrained than many of their Western peers.

Some politicians, indeed, think that other institutions already have too much power. Mr Olmert's new justice minister (in place of the one convicted of indecent behaviour) is Daniel Friedmann. He is one of a small but vocal group of jurists who think the Supreme Court became too activist under Aharon Barak, the recently-retired chief justice, who ran his court under the banner “everything is justiciable” and wanted to strengthen checks and balances against politicians.

That has provoked a backlash among Mr Barak's allies, a left-right split among parliamentarians, and a noisier debate in the media. Dirty laundry Israel may have, but at least it is getting a thorough airing.

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Iraq

The latest bombs

Mar 8th 2007 | BAGHDAD
From The Economist print edition

Why processions of pilgrims are particularly vulnerable

Reuters

The end of a pilgrim's road

FOR over three years Sunni insurgents have made a point of striking at Shia religious ceremonies that draw huge crowds of pilgrims to the country's main shrines: perfect targets for anyone wanting sectarian mayhem. This week two suicide-bombers blew themselves up amid a procession streaming through the town of Hilla, south of Baghdad, towards the holy city of Karbala, which was hosting a good 1m pilgrims. The death toll stands at 117, making it one of the deadliest attacks since the Americans overthrew Saddam Hussein four years ago. Some 40 more pilgrims were killed in other assaults en route. And a suicide-bomb a day earlier killed 38 people, mostly Shias, in Baghdad's book market.

The presumed perpetrators, probably al-Qaeda-linked or like-minded puritan Islamist groups, do not need a special occasion to strike, so the timing of such attacks has no particular significance. Still, the Hilla blasts suggest that the Islamists want to return the country to the bloody status quo that prevailed last year after the bombing of the Shias' revered shrine in Samarra in February.

Overall, the level of violence appeared to have dipped a bit in the last two months, partly because the government crackdown meant more troops in the streets and the Shia militias, such as the Mahdi Army loyal to Muqtada al-Sadr, a fiery cleric, have been told by their leaders not to confront the Americans; most are in hiding. Some Sunni leaders fear that the American offensive will therefore hit Sunnis disproportionately, while the Mahdi Army simply escapes to fight another day.

The blasts may also be intended to corrode Mr Sadr's authority by drawing the Mahdi Army back out into the streets as the protector of the Shias; they may then, hope the Sunni insurgents, be cut down by American firepower. Some Sadrists have blamed the Americans for Hilla's carnage, since the protective militias had been pushed off the streets.

It is too early to judge the effect of President Bush's vaunted “surge” of American reinforcements into Baghdad. American generals still say that at first glance the tally of deaths caused by sectarian hit-squads is down. But the massive casualties caused by a handful of suicide-bombs, albeit outside Baghdad, shows how hard it will be to bring down the overall figure of violent deaths.

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Western Sahara

Deadlock in the desert

Mar 8th 2007 | TIFARITI
From The Economist print edition

Morocco's latest initiative is unlikely to end one of Africa's oldest conflicts

Infographics

AFTER inspecting nearly a thousand foot soldiers and just over two dozen camel-mounted cavalry, the leader of the self-proclaimed Sahrawi Arab Democratic Republic marked the 31st birthday of his would-be state last week with a firm, if tired, message: the people of the Western Sahara would accept nothing less than a referendum allowing for self-determination and independence from Morocco. A proposal for Western Saharan autonomy that the Moroccans are busy promoting was dismissed with disdain. But such defiance comes at a time when prospects for the Sahrawi independence movement look as bleak as the barren land that it controls and from which its leader, Muhammad Abdelaziz, was speaking.

Before Spain pulled its troops out of its colony of Western Sahara in 1976, it ceded the territory to Morocco and Mauritania. The Polisario Front, a Sahrawi guerrilla group that had already been fighting the Spaniards, took up arms against the new enemy. It forced the Mauritanians back, but Morocco poured resources and settlers into the land it had claimed, and later sealed it off with a trench-cum-wall 1,500 miles (2,400km) long. A ceasefire in 1991 provided for a referendum, but Morocco has since backed away from any vote that includes the option of independence, as Polisario demands. A former American secretary of state, James Baker, resigned in 2004 as the UN's special envoy after seven grinding years of trying to end the row.

West of the wall, which is protected by sophisticated military equipment and an estimated 5m mines, the Sahrawis are now outnumbered by Moroccan settlers by at least two to one. Smouldering protest against Moroccan rule, which the Polisario calls its *intifada*, is energetically repressed. A UN report leaked last year said that the human-rights record in the territory was of “serious concern”.

Meanwhile, the Sahrawi refugees who fled the conflict in 1976 languish over the border in Algeria, Polisario's main ally. Polisario estimates that there are 165,000 refugees subsisting on foreign aid; life in the camps, it says, has been getting tougher. Floods in February last year destroyed many of the makeshift houses, while the UN cut food aid—under pressure, says Polisario, from Morocco; and some of the aid reportedly ends up on market stalls in Algeria and Mauritania. For the first time in decades a lucky few Sahrawis have been able to visit families in the Moroccan-controlled territory under a UN programme but at least 7,000 are still waiting to do so.

Morocco says it will put its autonomy plan for the Western Sahara to the UN next month. Under its proposals, the Sahrawis are expected to be offered a parliament with power over minor policies, cabinet ministries, and their own judiciary. But Morocco would fly its flag over the territory, the currency and stamps would be Moroccan, and Morocco's king, Mohamed VI, would be the highest religious authority in the land.

But Morocco seems unlikely to get majority support from the UN Security Council currently led by South Africa, which in 2004 joined a list of more than 70 mainly African and Latin American countries that recognise the Sahrawi Arab Democratic Republic. Even if the proposal did win support, Polisario leaders have vowed to reject it. They accuse Morocco of playing for time while trying to entrench its presence in the Western Sahara and continuing to exploit stocks of phosphate (the territory's biggest earner) and fish.

But neither does Polisario appear to have much chance of winning the heavyweight backing that might break the diplomatic deadlock. Following the failure of Mr Baker's mission and more recently the resignation of John Bolton (who took a close interest in the subject) as the American ambassador to the UN, America has become less engaged. The Spanish prime minister, José Luis Rodríguez Zapatero, who was recently in the Moroccan capital, Rabat, has made no serious effort to broker a deal. And Morocco has enjoyed unwavering support from France, a permanent member of the UN Security Council and still the most influential European country in the area. As the French vie to protect their influence there against America, they will not want to be seen to withdraw support from a key ally.

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Côte d'Ivoire

Carving up the country

Mar 8th 2007 | OUAGADOUGOU AND ABIDJAN
From The Economist print edition

A new deal offers the best chance yet for ending a civil war

IN SEPTEMBER 2002 Guillaume Soro, an obscure student leader, launched a rebellion that rapidly gained control of the northern half of Côte d'Ivoire, which had been west Africa's most stable and prosperous country. Mr Soro denounced what he called the dictatorial rule of President Laurent Gbagbo. After the fighting stopped, the two glowered at each other from either side of a UN- and French-patrolled strip of territory known over-optimistically as the "confidence zone". But on March 4th the best of enemies signed a peace deal, the 14th of the country's long crisis. It may be Côte d'Ivoire's best hope of peace yet.

That is because compromise has been reached on the two key issues: disarmament and identification. The latter is vital. Millions of Ivorians do not have identity papers, so northerners like Mr Soro and his fighters have been obstructed from getting the Ivorian citizenship that is rightfully theirs. A new government is to be formed within five weeks, probably with Mr Soro as prime minister. The rebels and loyalist fighters are to be integrated into a joint army; and a joint command, with rebels and loyalists having an equal number of officers, will be set up within two weeks.

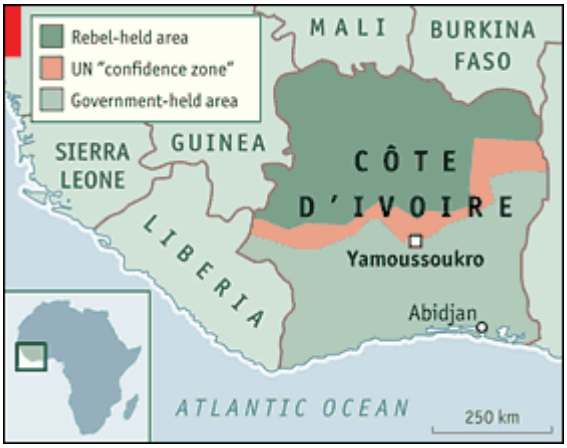
AFP

Gbagbo and Soro, brothers at last

Messrs Gbagbo and Soro have asked for the confidence zone separating their forces to be dismantled. Instead, a "green line" of checkpoints manned by international troops is to be introduced, and the 11,000 French and UN peacekeepers now in Côte d'Ivoire are to be gradually withdrawn. Joint patrols between rebels and loyalists are also planned, which would have been inconceivable only six months ago. The two belligerent parties have asked for an international arms embargo to be lifted three months after elections are held, and for the embargo on light arms to be lifted straightaway, to help both sides police their territory. Central authority should be restored as civil servants move up to the northern half of the country still controlled by the rebels.

The ultimate aim of an ambitious peace document is for a presidential election, already postponed twice, to be held within ten months. Will it happen? The reaction from both ordinary Ivorians and foreign diplomats trying to solve the conflict has been optimistic. The African Union is urging both sides to keep their promises; the failure of 13 previous accords hardly inspires confidence. An election will be risky for Mr Gbagbo, who would be unlikely to win a fair contest; both his main rivals were barred from running when he was elected in 2000. For his part, Mr Soro would lose a lot of his persuasive powers once he laid down his arms.

One reason for more optimism this time is that a detailed timetable has been drawn up and the accord signed after a month of hard negotiation between the president's camp and the rebels. Previous deals were rushed through and patched together in a matter of days under pressure from foreign countries. This time neither side has the excuse that the concessions it made were forced on it.



Furthermore, the Ouagadougou accord, named after the capital of neighbouring Burkina Faso where it was signed, seems to benefit both president and rebel leader. Foreign governments have become increasingly disillusioned with Mr Gbagbo and have tried at least twice to make him hand over many of his powers to an internationally appointed prime minister. This deal effectively excludes foreign countries from making big decisions. “It has given President Gbagbo all his presidential powers back,” says a Western diplomat.

A new body has been set up to oversee the accord, including two prominent opposition leaders, Alassane Ouattara and Henri Konan Bedié, who are not signatories of the accord itself. This increases the importance of Mr Soro, especially if he is soon named prime minister. In short, it looks like a carve-up between Messrs Gbagbo and Soro—just what may give this deal the glue that previous ones lacked.

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Ethiopia

Depressed among the Danakil

Mar 8th 2007 | NAIROBI
From The Economist print edition

Motives for a kidnap in one of Africa's harshest regions

THE kidnap of a group of five Europeans (three Britons, a British-Italian woman and a French woman), along with a dozen Ethiopian guides and helpers, has highlighted one of the harshest parts of Africa: the land of the Afars (or Danakil), who straddle the wastes between Ethiopia, Eritrea and Djibouti. The group's vehicles were found, shot up, near the small town of Hamadile on Ethiopia's side of the border with Eritrea. A week after their disappearance, no one knew what had happened to the captives. Three of them are British diplomats based in Addis Ababa, Ethiopia's capital.

The head of Ethiopia's Afar region insists that Eritrean soldiers had done the deed. Some 25 of them, he said, had slipped across the desert and marched the foreigners into Eritrea. Herders reported having seen them at an Eritrean military camp.

Eritrea's government, though in recent years given to erratic behaviour, denied having anything to do with the kidnap. It was a plot cooked up in Addis Ababa to make Eritrea look bad, it insisted. That seems unlikely too.

The foreigners could well have been kidnapped by Afars acting on their own. They have never shaken off their label as one of Africa's fiercest people. Romantics, such as the late British explorer Wilfred Thesiger, alleged that they were wont to castrate their foes and use their shrivelled genitals as snuff pouches.

The Afars say their real concerns are more prosaic: water, grazing and salt, which for centuries has been mined from the Danakil depression (in parts more than 300 metres below sea level) and taken up into Ethiopia's highlands by camel caravan. The Afars' hostility to outsiders is sharpened by their determination to defend their salt monopoly.

In any event, most diplomats in Addis Ababa suspect that Afar rebels have indeed nabbed their colleagues. Internal feuds have hampered Afar attempts to reunite under one flag. The Afar Revolutionary Democratic Unity Front has been active since it was founded in 1993, bringing three Afar outfits together. It kidnapped some Italian tourists in 1995, but freed them unharmed.

The Afars are more numerous than often realised. Up to 2m of them are spread across Eritrea, Ethiopia and Djibouti (previously called the French Territory of Afars and Issas). Ethiopia's present government has done more than any other to develop the Afar region on its side of the border. Still, most Afars remain illiterate, with little access to clean water or to medicine. Almost nothing grows on their land; their animals graze on desert bushes; the people mine ingots of salt from what looks like shimmering pack ice.

Still, despite the kidnap, more tourists are likely to venture into the Danakil depression, lured by the desert, volcanoes and geysers, by the Afar themselves, and by the lustre of danger. The worry is that kidnapping may become a new business, further destabilising a borderland already on a war footing.

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Turkish nationalism

Waving Ataturk's flag

Mar 8th 2007 | ISTANBUL AND WASHINGTON, DC
From The Economist print edition

AFP

There has been a lethal upsurge in ultra-nationalist feeling in Turkey

Get article background

SITTING in an office plastered with Ottoman pennants, portraits of Ataturk and the Turkish flag, Kemal Kerincsiz, a lawyer, says his mission in life is to protect the Turkish nation from “Western imperialism and global forces that want to dismember and destroy us”. In the past two years Mr Kerincsiz and his Turkish Jurists' Union have launched a slew of cases against Turkish intellectuals under article 301 of the penal code, which makes “insulting Turkishness” a criminal offence.

Mr Kerincsiz has confined his nationalism to the courts. But elsewhere new ultra-nationalist groups, some of them led by retired army officers, have been vowing over guns and copies of the Koran to make Turks “the masters of the world” and even “to die and kill” in the process. In January one of Mr Kerincsiz's targets, a Turkish-Armenian newspaper editor, Hrant Dink, was shot dead by a 17-year-old, Ogun Samast, because he had “insulted the Turks”. The murder, in broad daylight on one of Istanbul's busiest streets, was a chilling manifestation of a resurgence of xenophobic nationalism aimed at Turkey's non-Muslim minorities and the Kurds—plus their defenders in the liberal elite.

The upsurge threatens to undo the good of four years of reforms by the mildly Islamist government led by Recep Tayyip Erdogan. Indeed, it is partly in response to these reforms—more freedom for the Kurds, a trimming of the army's powers, concessions on Cyprus—that nationalist passions have been roused. The knowledge that many members of the European Union do not want Turkey to join has inflamed them further (the EU partially suspended membership talks with Turkey in December because of its refusal to open its ports and airspace to Greek-Cypriots).

Another factor is America's refusal to move against separatist PKK guerrillas who are based in northern Iraq. If the United States Congress delivers its pledge to adopt a resolution calling the mass slaughter of the Ottoman Armenians in 1915 genocide, Turkey's relationship with its ally would suffer “lasting damage”, says the foreign minister, Abdullah Gul.

Murat Belge, a leftist intellectual who is being hounded by Mr Kerincsiz, sees disturbing similarities between the racist nationalism espoused by the “Young Turks” in the dying days of the Ottoman empire (who ordered the mass slaughter of its Armenian subjects), and the siege mentality gripping Turkey

today. The perception, now as then, is that Western powers are pressing for changes to empower their local collaborators (ie, Kurds and non-Muslims), with the aim of breaking up the country. “This social Darwinist mindset that implies it's OK to kill your enemies in order to survive” has been perpetuated through an education system that tells young Turks that “they have no other friend than the Turks,” says Mr Belge. And it has been cynically exploited by politicians and generals alike.

Mr Erdogan and Deniz Baykal, the leader of the opposition Republican People's Party, have proved no exception. When more than 100,000 Turks gathered at Mr Dink's funeral chanting “We are all Armenians”, Mr Erdogan opined that they had gone “too far”. Both he and Mr Baykal have resisted calls to scrap article 301, though there have been hints that it will be amended.

The politicians are keen to court nationalist votes in the run-up to November's parliamentary election. Mr Erdogan also hopes that burnishing his nationalist credentials will help him to coax a blessing from Turkey's hawkish generals for his hopes of succeeding the fiercely secular Ahmet Necdet Sezer as president in May.

Yet a recent outburst by the chief of the general staff, Yasar Buyukanit, suggests otherwise. He declared that Turkey faced more threats to its national security than at any time in its modern history and added that only its “dynamic forces” [ie, the army] could prevent efforts to “partition the country”. These words, uttered during an official trip to America, were widely seen as a direct warning to Mr Erdogan to shelve his presidential ambitions.

Others do not rule out possible collusion between nationalist elements within the army and retired officers who are organising new ultra-nationalist groups (one is said to be training nationalist youths in Trabzon, where Dink's alleged murderers came from). “The real purpose is to sow chaos, to polarise society so they can regain ground [lost with the EU reforms],” argues Belma Akcura, an investigative journalist whose recent book about rogue security forces known as the “deep state” earned her a three-month jail sentence. It would not be surprising if their next target were a nationalist, she adds.

Meanwhile prominent writers and academics, including Mr Belge, continue to be bombarded with death threats. Some are under police protection. Orhan Pamuk, the Nobel prize-winning author whom Mr Kerincsiz took to court over his comments about the persecution of the Armenians and the Kurds, has fled to New York.

Where will matters go from here? This week one court banned access to YouTube after clips calling Ataturk gay appeared on it; and another sentenced a Kurdish politician to six months' jail for giving the PKK leader, Abdullah Ocalan, an honorific Mr. But a private television station also withdrew a popular series, “The Valley of the Wolves”, that glorifies gun-toting nationalists who mow down their mainly Kurdish enemies, after the channel was inundated with calls for the show's axing. The battle for Turkey's soul is not over yet.

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Eastern Europe's economies

Hot and bothered

Mar 8th 2007
From The Economist print edition

Overheating economies, slow reform and messy politics make a grim mixture

NEVER before has eastern Europe enjoyed such good fortune. Most of the region is anchored in NATO and the European Union; it is prosperous, stable, democratic and secure. GDP growth is surprising everyone. Even a supposed sluggard such as Macedonia is growing at 4%, much faster than “old Europe”. In most other countries growth is above 5%; in the Baltic stars of Estonia and Latvia it is over 10%.

Yet the mood is surprisingly gloomy. Across the region, millions have left to work abroad, sending wages soaring, threatening competitiveness and worrying investors. Countries not yet in the EU fear that even rapid reforms may not help them join. In the ten ex-communist countries already in the club, reform has largely stalled. In Romania the political discipline that preceded accession has ended spectacularly. In Slovakia reforms may be reversing. As for the euro, nowhere in the region looks likely to follow Slovenia's example and join soon.

The immediate fear, stoked by choppy markets and memories of financial crises in East Asia in 1997 and in Latin America more often, is of an economic crash. It might start in the Baltics. This week Fitch, a rating agency, warned Latvia that it faced downgrades if it did not get its economy under control. In 2006 Latvia's current-account deficit was 20% of GDP, the highest in the EU. That reflects a ballooning in foreign banks' mortgage lending to locals, denominated mostly in euros, which has fuelled a property boom. The story in Estonia and Lithuania is similar—and looks equally unsustainable. For all their gorgeous architecture, it is hard to see why the Baltic capitals should be pricier than Berlin, Vienna or Frankfurt.

It is also easy to imagine how the property bubbles might pop. Construction firms are finding it hard to hire the workers they need to finish the apartments that the property companies have already paid for, using money their customers have already borrowed from abroad. In a bizarre sign of overheating, some Estonian firms are even importing workers from Finland. A harder question is what might happen next. The Baltic banks are largely foreign-owned by solid Scandinavian banks. They can afford to bail out their local subsidiaries if they need to. Only Latvia has a big locally owned bank, Parex, but it has been a relatively cautious lender.

All three countries have fixed exchange rates (currency boards in Estonia and Lithuania, a currency peg in Latvia) fully backed by foreign-currency reserves. It is reassuring that none of them has much foreign debt, and that their currencies and securities are only lightly traded, creating little scope for a speculative attack. Less reassuring, however, their exchange-rate regimes leave little room for monetary tightening. And weak coalition politics undermine hopes of a tight fiscal policy or of structural economic reforms that would maintain competitiveness as costs rise.

Edward Parker of Fitch says that a Baltic crash might mean that some countries have to follow the example of Portugal, which has been stuck with high costs and low growth after an unsustainable boom. That would be sad for the Balts. But need it spread to other east European countries?

On the face of it, no. Only Slovakia has Baltic-style growth (an annual rate of 9.6% in the fourth quarter of 2006, with industrial production up by 17.4% year-on-year in January). It is more flexible (with a floating exchange rate) and its central bank is still soundly run. The government insists that it wants to

join the euro in 2009. But some in the euro area mutter that Slovakia's low inflation will be deemed “unsustainable” when the time comes.

A bigger worry is Hungary. The government is trying to regain control of public finances after a splurge to win last year's election. Hungarians have borrowed hugely in foreign currency, assuming the euro is a certainty. That creates all the conditions for a nasty crunch, with devaluation, possible default and recession. After some perilous wobbles last year, the government's austerity programme has won plaudits from bankers. But planned reforms of public spending have yet to bite, and the government has been timid in conceding higher public-sector pay.

The underlying failing is weak and indecisive government across the region, which needs years of good government if it is to catch up. Romania, the second-largest east European EU member, is paralysed by a political feud between the prime minister and president. As a by-product, the upper house of parliament has voted to dismiss the justice minister, Monica Macovei. In sunny economic weather, such political shenanigans would be mere details. In a chillier climate, they make east Europe's future more worrying.

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Russia and murder

Dangerous times

Mar 8th 2007
From The Economist print edition

Bad things often happen to critics of the Russian authorities

BUYING a bag of oranges is an odd thing to do before jumping out of the fifth-floor window of an apartment block. But Ivan Safronov, defence correspondent for *Kommersant*, a leading newspaper, was not the suicide type, say his colleagues. A burly colonel turned journalist, he was an irritant to the Russian army, because he often exposed their mishaps and secret arms deals. Before he died, Mr Safronov was investigating the sale of Russian arms and military jets via Belarus to Syria and Iran. The Federal Security Service (FSB) apparently warned him not to publish the story.

Russia is the second-deadliest country for journalists after Iraq, according to a new study from the International News Safety Institute, a lobby group. It is different from Iraq and Colombia, a third death-trap for journalists. But what the three have in common is corruption, lawlessness and a culture of impunity for killers, says the report. Few of the 88 journalists' deaths in the past decade in Russia have even been investigated.

Mr Safronov may not have been murdered. The circumstances are hazy: he was off duty and came home early. Two students who heard him fall called an ambulance but were told to call back later—by which time Mr Safronov was dead. Unlike Anna Politkovskaya, a Russian journalist who was killed in October, Mr Safronov was not well known inside or outside Russia. The police are investigating a “forcible suicide”.

There is even less certainty about what happened in America last week to Paul Joyal, a former staffer for the Senate intelligence committee and a friend of Alexander Litvinenko, an ex-KGB agent killed by radiation poisoning in London last year. Mr Joyal, who also spoke out against the Kremlin, was shot outside his home in Maryland by two alleged robbers who did not even bother to take his wallet and briefcase.

What is certain is that nasty things happen to people who irritate the Russian authorities by investigating corruption, human-rights abuses or shady financial deals. Russia may be freer than the Soviet Union, but it is also less predictable. Soviet-era dissidents were arrested and locked up or exiled. Today's dissidents tend simply to be beaten up, shot, poisoned or blown up.

Evgenia Albats, a journalist and author of a book on the KGB, says the atmosphere of intimidation is typical of the FSB, which has gained huge power under Vladimir Putin. The president may be unable to control his former colleagues, who often act off their own bat. Mr Putin may not be responsible for journalists' deaths, but he has created the atmosphere in which they occur.

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Jean-Marie Le Pen

The far-right fighter

Mar 8th 2007 | PARIS
From The Economist print edition

It will be hard for the perennial National Front leader to repeat his 2002 upset

IT IS a cardinal rule of French politics that a presidential candidate must know how to caress a bovine bottom with aplomb. Sure enough, Jean-Marie Le Pen, leader of the National Front, dropped in on this week's Paris agricultural fair to fondle a silky Limousin cow and a heaving bull. Dressed in a tweed cap and suede jacket, he did not thrill the crowds as much as President Jacques Chirac, the farmers' favourite, who spent four hours at the fair. But the absence of jeering was a reminder of how far this once-ostracised extremist is now accepted in French politics.

Mr Le Pen is trailing in fourth place for the first round of the election on April 22nd. A March 7th poll by CSA gave him 14% next to 24% for the centrist François Bayrou, 25% for the Socialists' Ségolène Royal and 26% for the centre-right's Nicolas Sarkozy. But nobody can forget that in 2002 Mr Le Pen was also behind in the polls—and yet scraped into the run-off ahead of the Socialist candidate, Lionel Jospin. Opinion polls underplay Mr Le Pen's support; almost half of respondents say they are undecided. Could this crafty ex-paratrooper pull off another upset?

All the ingredients for a repeat seem to be in place. The reasons for the electoral rebellion of 2002 remain: unease over immigration and crime, disillusion with the political class, a faltering economy. Mr Le Pen has always played on these, blending xenophobia with an anti-establishment message. “How can one not be shocked by the fact that, in France, we don't as a priority look after the French first?” he thundered in Marseilles recently. He is just as vocal denouncing an elite that has lost touch with ordinary folk—a message that may explain his curious appeal in ethnic neighbourhoods of the *banlieues*.

Moreover, Mr Le Pen's poll numbers seem more solid than his rivals'. Some 81% of his backers say they are sure of their choice, according to Ifop, a pollster, compared with 59% for Mr Sarkozy, 53% for Ms Royal and a mere 38% for Mr Bayrou. Mr Le Pen is a fiery speaker with a charismatic presence. In one television show he was loudly applauded; afterwards, 37% of those polled said they thought he was “nice”. A veteran of wars in Indo-China and Algeria, and of four presidential elections, the 78-year-old Mr Le Pen remains a formidably pugnacious campaigner.

All the same, this time will be harder for him. The two front-runners, Mr Sarkozy and Ms Royal, are scoring better than their counterparts in 2002. The consternation of the left after that year's result is likely to prompt a rally to the Socialists this time. The emergence of Mr Bayrou as a third man has squeezed the fringes. Between them, the three leading candidates now poll 75% of voters; in the first round in 2002, the top three got just 53%.

Mr Sarkozy, who will remain interior minister until the end of March, has also been nibbling at the far-right vote with hard talk on both immigration and crime. He even echoed a one-time National Front slogan, declaring that “if anybody is bothered by being in France, they shouldn't hesitate to leave.” In any case, Mr Le Pen has yet to secure the 500 signatures from elected officials he needs by March 16th. In 1981, he failed to get on to the ballot.

Back at the agricultural fair, the far-right leader and his daughter, Marine, surrounded by burly bodyguards, tramped dutifully along straw-strewn alleys. A huge bull stirred as the entourage passed. “Who's that?” asked a small child. His mother steered him away. “Oh, just an old man who wants to be president.”

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Italy's welfare reforms

Tommaso's gamble

Mar 8th 2007 | ROME
From The Economist print edition

A bold plan to curb welfare spending could end up raising it instead

MILD-MANNERED and soft-spoken, Italy's finance minister, Tommaso Padoa-Schioppa, does not seem like much of a gambler. But, unfazed by the past month's shakiness of Romano Prodi's centre-left government, he and the employment minister, Cesare Damiano, are staking much on an ambitious and potentially hazardous reform of the welfare system. If it works, it would help to modernise the entire economy. If it backfires, it could bedevil efforts to contain public spending.

In January the OECD said that if pension and health spending were not trimmed, Italy's public debt, the world's third-biggest, could more than triple by 2050. A rapidly ageing population makes pensions a particular worry. Already, they take up 14% of GDP; finance-ministry projections show this figure rising to over 17% by 2035 if future entitlements are not adjusted to match rising life expectancy.

A 1995 reform envisaged just such an adjustment after ten years. But, sensing a vote-loser, Silvio Berlusconi's centre-right government dodged putting it into effect before last year's election. The Prodi government could impose a change, but that would outrage trade unions. Mr Padoa-Schioppa's bold plan is to use this issue to engage the unions in wider-ranging talks, starting later this month, on a raft of welfare reforms that range from unemployment pay to higher retirement ages.

Italy's welfare system is atuned to a way of life that was already disappearing 20 years ago. It was one in which children lived with their parents until they found a job for life, and workers died conveniently soon after retiring. Italy's pension spending is high, but its outlay on unemployment benefits is among the lowest in the European Union. Young people between short-term contracts get nothing. Nor, until they secure a permanent job, do they accumulate pension entitlements. The 1995 reform trimmed future pensions, but only for those who had then been working for less than 18 years.

The result is a bad dose of inter-generational unfairness. In Italy, says Mr Padoa-Schioppa, “pensions are a problem for the young”. He wants “welfare arrangements that encourage flexible employment, together with a pension system that is fairly balanced and takes advantage of the fact that life expectancy has increased to get people to work longer.” That means asking the unions to endorse not only lower pensions, but also later retirement. The minimum retirement age is due to rise from 57 to 60 next year—but that is still below levels in many other countries.

The government's unusual tactic is to make a string of offers ahead of the talks with unions: unemployment pay for young workers between short-term contracts, notional contributions to boost future pensions, a rise in unemployment benefits, a boost for the smallest pensions and a slower raising of the minimum retirement age. Few of these changes would benefit union members, who are mostly old and in permanent jobs. But the government hopes that union leaders will find it embarrassing to reject its generosity and will thus accept its other reforms.

Therein also lies the risk. The government can afford to be generous right now, as tax revenues surged last year. But much of this increase reflected cyclical or one-off measures. If the unions take too much and do not give up enough, a plan that set out to cut long-term spending could turn into one that raises it instead.

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Danish demonstrations

Of riots and righteousness

Mar 8th 2007 | COPENHAGEN
From The Economist print edition

Rioting squatters v the missionary position

COPENHAGEN'S image is one of a peaceful Nordic oasis. Yet last weekend it erupted in a frenzy of violence, with masked demonstrators battling police, bonfires lit in the streets and local burghers left spluttering amid the teargas. Shop windows were smashed, cars set ablaze, a school ransacked—and almost 700 people were arrested. The riots came after the eviction of left-wing activists squatting in a youth centre called Ungdomshuset. The police, acting on a court order, staged a flamboyant dawn raid to secure the building, prompting its erstwhile squatting tenants to vent their anger in the streets.

There is more to this tale than a mere squabble over tenancy rights, however. The ousted youths, a motley lot of anarchists, autonomists, punks, Marxists, and vegans, had occupied the building since 1982, when the city let them in to keep them off the streets. Ungdomshuset evolved into a music venue and a hub of leftist activism. Locals grumbled about loud music and graffiti, but the police were happy. Then the council decided to sell. The buyer was Faderhuset, a conservative Christian sect led by Ruth Eversen, a firebrand evangelist preacher.

Ms Eversen says that God told her to buy the house. “God often tells me to do things,” she claims. Her mission is to return Denmark to the Christian path, starting in Norrebro, the district that houses not just the Ungdomshuset but also many Muslims. Ms Eversen has not revealed if she was also acting on God's orders when she decided to demolish the building within hours of gaining vacant possession.

The protesters suspect that the city may have deliberately sold their home to their ideological antithesis. A small crowd with studs in their noses and tears in their eyes watched unhappily as bulldozers demolished it. “I feel I'm being squeezed out. There's no room for my culture any more,” said one teenager.

The government has stayed well clear of the row. But there are echoes from the past, even so. One of Anders Fogh Rasmussen's first moves when he became centre-right prime minister in 2001 was to shut down various agencies whose opinions he disliked. He also tried to “normalise” Christiania, a freewheeling Copenhagen district that favours soft drugs and alternative lifestyles. Ungdomshuset has a history of left-wing agitation: International Women's Day was proclaimed there in 1910 and visitors included Lenin and Rosa Luxembourg. Whatever Mr Fogh Rasmussen's views of Ms Eversen's crusade, he will not shed any tears over the house's razing.

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Charlemagne

Summit surrenders

Mar 8th 2007
From The Economist print edition

Peter Schrank

How much does the European Union really encourage competition?

THE eyes of the world will be on the European Union's summit in Brussels this week. So claims the European Commission's president, José Manuel Barroso, anyway. He may just be wrong; powerbrokers in Washington, Beijing and Delhi probably have better things to do with their time.

But let us pretend they did tune in. What would they find? The summit hopes to set the rules for a common energy policy and a single energy market, both of which would make quite a difference. To establish the energy market, the commission has proposed breaking up national gas and electricity behemoths around Europe into separate companies for the transmission and retail ends of the business (this is known in EU jargon as “ownership unbundling”). But what the outside world actually sees will be quite different. The EU's political leaders are likely only to require transmission and supply to be run separately, allowing the behemoths to retain ownership, and they may set up regional energy markets, rather than a single European one. Whatever the final details of the eventual deal, the summit's outcome will thus fall well short of its advertised goals.

This is typical enough. For the past two years the commission, the central institution in the European project, has been selling itself as the embodiment of economic modernisation. When he came to office in 2004, Mr Barroso set economic reform (ie, the Lisbon Agenda) as his priority. Under his leadership, he said, the commission would become a slasher of red tape, an advocate of free markets and a sponsor of fiercer competition. In Paris he was rewarded with the sobriquet of an “ultra-liberal”.

There was sound sense in choosing this course, even so. Europeans have been rebelling against grand dreams, such as enlargement or the draft constitution. The hope was that they might respond more favourably to measures to promote competition, cut prices and help consumers. To use a phrase of the moment, this promises a “Europe of results”. And, at the macroeconomic level, the results have been pretty good: growth was healthy last year and EU countries created 3m jobs. But the answer to the question of whether the union has really fostered free markets and more competition has to be: well, it's tried.

On the credit side, fines on cartels are running at record levels—last month, the commission imposed its largest-ever penalty (on lift-makers, for rigging the market). The European Court of Justice has slapped down a German law protecting Volkswagen from takeover. The commission has told 17 countries to get rid

of special protective rules cosseting notaries. Only last week, the commission and American trade negotiators reached a tentative “open skies” deal that could partially liberalise air travel between Europe and the United States (see article).

Moreover, at least to judge by intentions, the EU's drive to open up markets is accelerating. The commission recently outlined plans to limit the remaining powers of national governments to block trade in goods within the EU. It wants to storm the last bastion of post-office monopolies (carrying ordinary letters). Neelie Kroes, the competition commissioner, is investigating the insurance industry for conflicts of interest, and promising to tighten the rules against state aid. This may come to nothing, but at least Europe's competition authorities show willing.

The debit side is, however, just as weighty. The commission has given up its long-running attempt to scrap the use of poison pills and other barriers to takeovers—a victory of managers over shareholders. It has limited the ability of national watchdogs to intervene in cross-border financial mergers and backed away from threats to abolish “interchange fees” charged by credit cards and retail banks. (Mrs Kroes once lambasted these companies for “outrageous” profiteering.) The single-market commissioner, Charlie McCreevy, says the big four accounting firms ought to be shielded from lawsuits that threaten their stability; he might even propose capping their liabilities. None of these actions is necessarily wrong-headed. But they are largely designed to help specific industries rather than to improve the working of markets. In short they are pro-business, not pro-market.

This generally pro-business stance has been softened by good old-fashioned economic populism, such as price controls on mobile-phone roaming charges, and plans to limit car emissions, albeit not as much as green lobbyists had hoped. In both cases the commission proposed new rules without the sort of impact assessment it promised when it set itself up as a champion of competition and destroyer of red tape. These decisions were thus pro-consumer, but again not necessarily pro-market.

The national resistance

The biggest problem has long been the ability of national governments to squash the commission's more competitive instincts. At best, this produces uneasy compromises between consumers and business—examples include the deal over car emissions and the extraordinarily strict rules governing every aspect of the chemicals industry. At worst, national governments manage to eviscerate reforms altogether. Witness the gutting of the commission's efforts to reform services. Witness, too, the lamentable failure to set up an EU-wide patent. And witness the latest financial-markets directive, intended as a single rule-book for Europe's investment industry, which has had so many national bells and whistles added that it risks becoming, in Mr McCreevy's own words, a “nightmare”.

The commission could reply that it must be pragmatic, and that it is at least pushing for consumer rights as the only force strong enough to stand up to both governments and businesses. That much is true. But sometimes pragmatism lures it into backroom deals with big countries, notably France and Germany, undermining both reform in general and hopes of a break-up of national champions. That is not so much pragmatism as negotiating the terms of your own surrender.

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House of Lords

Jobs for life no longer

Mar 8th 2007
From The Economist print edition

Getty Images

A surprise vote should drag the upper house forward into the 18th century

Get article background

AMONG the quirks that make the House of Lords such a delightful place, the difficulty of getting hold of its members rates high. Few have offices, many eschew e-mail and the only blackberries to be found are in the dining room, beneath a thick layer of crumble.

This may now change, after the House of Commons voted by a majority of 113 on March 7th for a fully elected House of Lords. The vote was of an advisory kind, and so has no force as legislation. But it will guide the government's choices when it introduces a bill, perhaps as soon as in the next parliament, to reform the Lords. Their Lordships have a say next week, and are unlikely to embrace their total liquidation. But make no mistake: a big step towards real reform of the second chamber has been taken.

The clarity of the outcome is a surprise. Last time the Commons was asked to vote for change, in 2003, MPs wound up looking silly. None of the seven options on offer gained decisive support and all the rousing talk of reform came to nothing. The same might have happened this time. MPs had eight options to choose from. First they were asked whether they wanted to abolish the Lords altogether. Then, after that had been rejected, seven options were presented, ranging from appointing all the members of the upper house to electing them all, with various blends in between. Jack Straw, the leader of the House of Commons, favoured a 50-50 mix, as did Tony Blair. Gordon Brown, the chancellor of the exchequer and probable prime minister from this summer, preferred a chamber with 80% of its members elected.

Most expected votes to cluster around the 80-20 split. So the majority for full democracy is a surprise too. The outcome had some unexpected authors. Some MPs who opposed reform voted for the most extreme version on offer, calculating that this was the best way to goad the Lords into opposing it. Most, though, just wanted the tidy resolution of what had long seemed an anachronism, albeit a rather effective one.

If resisting the government's will is indeed a mark of effectiveness, then the unreformed Lords have been doing a fine job since most of their hereditary members were removed from the chamber in 1999. In the intervening years the Lords have defeated the government more than 350 times, according to the Constitution Unit at University College London. Although Labour has the largest number of peers, they are harder to control than their cousins in the lower house. And an alliance of Conservatives, Liberal

Democrats and independents can easily defeat the Labour lords, should they choose to do so. They have been particularly truculent when defending unpopular causes such as civil liberties. Even so, support for this crew of unelected spoilers has been rising.

The pressure to reshape the Lords comes not from the voters but from politicians. On the face of it, this is odd. MPs know that a democratically elected upper house will challenge their supremacy, and many grumbled about this in the debate that preceded the vote this week. Three things tipped them towards getting rid of all hereditary and appointed peers.

First, some opposition MPs wanted a brake on government, even if it might slow down their own party one day. Second, arguing against more democracy is a hard thing for any elected politician to do. And third, the vote took place just as a whiff of old corruption surrounding the present system for appointing the Lords intensified (see article). The Metropolitan Police, who have been investigating what has become known as the cash-for-honours affair, probably had more sway over MPs than centuries of accumulated thought about what Britain's constitution might look like. Most MPs explained their votes in terms of sweeping away once and for all the parties' powers of patronage.

The party continues

For Mr Straw, the result is a triumph, even if it was not exactly the one he hoped for. He is tipped these days as a possible chancellor if Gordon Brown becomes prime minister, and the vote has improved his prospects. But those who hope that the vote will see the death of party patronage in the upper house should probably look away now.

Much depends on how the new breed of lord is elected. The government wants a third to be chosen every five years. Each member would serve a single 15-year term and thereafter would be barred from standing for election to the upper house again. The appointed peers (and the few remaining hereditaries) would slowly shuffle away, but in the meantime the Lords would swell to a huge size, mixing life peers with temporary ones. The law lords are to be pulled out into a separate supreme court, but the fate of the 26 Church of England bishops who currently sit in the Lords is not yet clear.

If the government gets its way, the lords would be chosen from regional lists and elected according to proportional representation, as members of the European Parliament are now. The parties would control these lists, so the same sorts of people who are currently appointed to the Lords—doughty supporters, ageing MPs getting in the way of younger talent and perhaps even party donors—might well end up there, but this time with offices and pension plans. Nobody really knows what the change might cost, though David Lipsey, a Labour peer who used to write for *The Economist* and opposes the reform, has estimated it at over a billion pounds.

Nor is it clear what these new politicians ought to do with their mandate. Britain is not a federal democracy, so the Lords would have no separate interest to balance against the will of the Commons. But right now such objections seem churlish. A fully elected Lords is far neater than the other options, and the vote marks an end to centuries of holding out against democracy. Now all that's needed is someone to work out what its powers should be.

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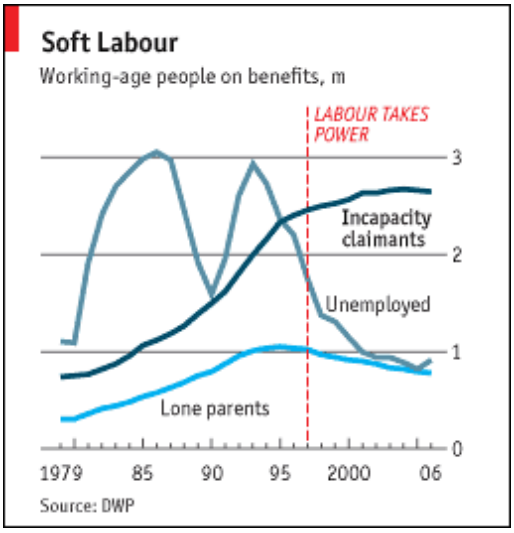
Welfare reform

Snail's progress

Mar 8th 2007
From The Economist print edition

Labour makes another timid move in the right direction



IN 1997 Labour won power pledging that it would be the "party of welfare reform". In 2001 it scored a second victory at the polls with a promise to achieve full employment in every region. In 2005 Labour won a third term on a manifesto that claimed: "The active welfare state created since 1997 is working."

Yet on March 5th Tony Blair was heralding yet another leap forward. The prime minister endorsed new ideas for welfare reform in a report by David Freud, a former City banker. Gordon Brown, the chancellor of the exchequer who is expected to take over from Mr Blair later this year, also backed the proposals, saying that he would champion new welfare reforms.

Never mind new reforms, what about the past decade's? Since 1997 Labour has had ample time to match rhetoric with substance. Mr Brown has strived to make work pay for low earners by bumping up their income with tax credits. And special programmes called "new deals" now help various categories of unemployed people get back into work.

Despite all this effort, official benefit figures reveal a disappointing record. The number enrolled as unemployed is certainly lower than it was in 1997 (see chart). For most of the past ten years, however, it declined at a slower rate than in the mid-1990s. And no sooner did Labour re-pledge full employment in 2005 than the jobless count started rising again.

More important, the number of people claiming incapacity benefits has risen since 1997 and, at 2.7m, now dwarfs the total claiming unemployment benefit. The government reckons that around 1m of the incapacity claimants could work if they wanted to. Meanwhile the number of jobless lone parents has declined fairly modestly to 800,000.

Labour's performance is all the more dismal given the strength of the economy and labour market over the past decade. Since the election in May 1997, working-age employment has risen by 2.1m. Yet almost all this increase can be attributed to a rising population, in large measure because of higher immigration. The success of so many east Europeans at finding work in Britain since May 2004 has thrown into sharp relief the failure of the government's welfare-to-work reforms.

That failure is for two reasons. First, although it is now more worthwhile for lone parents to get jobs, the overall effect of Mr Brown's tax and benefit changes has been to reduce work incentives, says Stuart Adam of the Institute for Fiscal Studies. Second, stung by an early revolt among Labour backbenchers in 1997 against a crackdown on lone parents, ministers have been cautious about imposing sanctions. Despite the claim in 2005 to have produced an "active welfare state", the government has done too little to chivvy back to work claimants other than those on unemployment benefit.

Altogether, there are 4.4m people of working age claiming the three main sorts of income support that go to the jobless, those who say they are incapacitated and lone parents. Of these people, 3.1m are especially difficult to help because they have been out of work for more than a year.

Benefit dependency on this scale among working-age adults imposes hefty economic and fiscal costs. The labour supply rises more slowly than would otherwise be the case, which trims potential GDP growth. The bill for the three main out-of-work benefits comes to over £18 billion ($35 billion) in the current financial

year—over 3% of public spending.

There are political penalties, too, which worry Labour. A third of poor children are being brought up by workless lone parents. Unless more of them find jobs, the government will be hard-pressed to meet its much-trumpeted target to reduce child poverty. Ministers also fear a backlash from voters fed up with paying for the work-shy. John Hutton, the work and pensions secretary, has said that welfare reforms must “confront head-on the ‘can work, won't work culture’ in our country”.

Not before time Labour is confronting its own “can reform, won't reform” culture. A bill now trundling through Parliament and due to come into force next year is overhauling incapacity support. The aim is to reduce the number claiming it by 1m over ten years. Re-labelled the “employment-and-support allowance”, the benefit will be reconfigured so that people are less likely to get stuck on it. As important, there will be financial sanctions for claimants who fail to meet conditions designed to get them back to work.

Now ministers are turning their sights on single parents. Since 1997 their employment rate has risen from 45% to 57%. This remains much lower than the government's aim of 70%, however—let alone the 80% rate in Denmark. One reason is that lone parents do not have to look for work until their youngest child is 16—a leniency that few other countries emulate.

The main reform proposed in Mr Freud's review is to reduce this age to 12 as soon as practicable, most likely in 2010. Thanks to other reforms, schools will be open longer then, making it easier for parents to work. Although ministers hint that the age may fall further, their go-slow approach contrasts with that of Australia, which has had a similar rule. The government has recently brought down the age from 16 to seven for the youngest child of single parents receiving income support.

Mr Freud also wants private and voluntary organisations to take the lead in tackling long-term benefit dependency. He thinks that they would be more effective than the state employment service because they could be paid for their success in getting claimants back to work. Predictably, his innovative suggestion has provoked howls of anguish from the unions.

Labour has left it late to get serious about welfare reform. A decade after Mr Blair promised to transform the welfare state, too little has been achieved. Labour will have only itself to blame if voters turn their backs on its lacklustre record.

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Press freedom

Publish and be damned

Mar 8th 2007
From The Economist print edition

A battle over the public's right to know

AFTER a year-long stream of press leaks about the police investigation into the government's cash-for-honours scandal, Lord Goldsmith, the attorney-general, has decided to get tough. In the past week he has slapped a gag order on the BBC, sought an injunction against a newspaper and threatened at least two others with similar bans. The media have cried foul, insisting that there is a well-established principle in Britain that the state cannot exercise “prior restraint” on the press.

The BBC was the first to come under the cudgel. It was served with an injunction (later partially lifted) just one hour before it was due to air a story on March 2nd hinting at an attempted cover-up. It alleged that Ruth Turner, one of the prime minister's senior aides, had sent a memo to Jonathan Powell, Tony Blair's chief of staff, expressing “concern” that Lord Levy, Labour's chief fundraiser, had put to her a version of events which she believed to be “untrue”, adding that she thought the prime minister should be told. Downing Street says her memo was never sent to Mr Powell and that it was “unlikely” the prime minister was ever informed.

Three days later the *Guardian* was likewise threatened with an injunction to stop it publishing a report claiming that the police had shifted the focus of its inquiries from whether donors to the Labour Party had been rewarded with peerages to whether there had been an attempt to pervert the course of justice. It said that the police were particularly interested in discovering whether Lord Levy had asked Ms Turner to adjust her account of a meeting between the two last summer. The *Guardian* decided to print its story anyway and a judge refused to stop it.

The attorney-general's attempt to gag the press in an affair of such political importance has sparked a fierce debate, once again, over how to balance the often competing interests of press freedom, a defendant's right to a fair trial and the public's right to see guilty men punished. It has also raised questions over Lord Goldsmith's own double-hatted role as government minister and the country's independent chief legal officer with a duty to act in the public interest.

In seeking the injunctions, Lord Goldsmith insisted he was wearing the latter hat. He said he had acted at the request of London's Metropolitan Police, who argued that disclosure of “certain information” at that stage would “impede their inquiries”. On its own, this does not appear to constitute an adequate basis for an injunction. Under Britain's 1981 Contempt of Court Act, publishing material is an offence—and potentially liable to a gag—only if it poses “a substantial risk that the course of justice will be seriously impeded or prejudiced”. This would still have to be proved in any proceedings against the *Guardian*.

Four people, including Lord Levy and Ms Turner, have been arrested and questioned in the cash-for-honours affair. Mr Blair has himself been interviewed—twice—by the police. But no one has yet been charged, and charges may never be brought. All of those involved deny wrongdoing. In most countries outside Britain and the Commonwealth, journalists are more or less free to write what they like about criminal proceedings, provided it is not grossly inaccurate. In America, for example, coverage of the O.J. Simpson murder trial was detailed and intense.

The cash-for-peerages fuss has hogged the headlines on and off for months, so many wonder why Lord Goldsmith should have chosen this particular moment to crack down on the press. Gag orders at this stage in the proceedings are rare, though not unprecedented. Most journalists believe they can report pretty well what they like until charges are brought, though the law in fact allows for restrictions from the moment of arrest. Some interpret the present twitchiness as a sign that charges may be imminent.

Lord Goldsmith has often berated journalists for overstepping the mark. In a speech in 2003 he noted that over the preceding year more than 70 contempt-of-court cases had been considered sufficiently serious to

warrant investigation by his office. This had given him a “good deal of concern”. As the sensational reporting of the recent Ipswich prostitute murders shows, little has changed since then.

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Private Finance Initiatives

Bad, and not improving

Mar 8th 2007
From The Economist print edition

The government still has a hard time with PFI contracts

FINANCIAL innovation is a British speciality. Even the government is at it: the Private Finance Initiative (PFI), brought in by the Tories in 1992, is now being exported around the world. In a PFI deal, a private firm contracts with the government both to build something (a school, say, or a road) and frequently to maintain it for decades. Nearly 800 deals have been signed since 1992, with a combined value of more than £55 billion.

But the scheme is controversial. The jaded see Britain's PFIs as little more than wheezes for keeping the government's spending off its balance-sheet. Boosters argue that private-sector efficiency will offset the higher cost of capital of PFI projects (and the need to make a profit), saving money in the long run.

That defence has looked less credible since 2003, when the parliamentary Public Accounts Committee (PAC) produced a report criticising the government for inept and over-lengthy PFI procurement. The criticism inspired the National Audit Office (NAO), a spending watchdog, to do its own investigation. The resulting report, based on three years' data, was published on March 8th.

Although couched in the NAO's usual cautious tones, it makes worrying reading. The average tendering period for a PFI is 34 months, no faster than when the PAC produced its report in 2003. Contracts are often altered after the final bidder has been chosen, so the discipline of competition is removed. Departments regularly underestimate the cost of professional advice, typically by around 75%. Besides heaping up the costs to taxpayers, such difficulties may be turning companies off the idea of bidding for work. Before 2003 85% of PFI projects attracted three or more bidders. By 2006 that was down to 67%.

In fairness to officials, negotiating a decades-long contract with a private company is bound to be a tricky exercise requiring plenty of expensive legal gymnastics. Practice can help. The education department plans to use PFIs to rebuild hundreds of schools across the country, and the contracts have been complicated. Despite that, so many have been signed that the typical school PFI is now negotiated within 25 months, nine months faster than average. But this is the exception rather than the rule: the NAO worries that lessons learned on one deal are not generally applied to others.

The report suggests a number of sensible improvements, but many are similar to the PAC's recommendations of four years ago. Official failure to act on such advice gives ammunition to those who see PFIs as simply an accounting trick. “I wish I could say I was amazed,” says Edward Leigh, the PAC's chairman. “But there's something tragically predictable about it all.”

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Private schools

Class war

Mar 8th 2007
From The Economist print edition

For those who pay, higher fees are on the way

BRITONS don't like the idea of schools turning a profit on the sacred task of teaching their children. Most fee-paying schools are charities, and the few firms that run schools as businesses have not made many inroads into the sector.

Having charitable status has not imposed many obligations, though—such as keeping fees down so that poorer families can afford them, for example. Until now schools, unlike most charities, have not had to prove that their services were “of public benefit”. This exemption was removed last November, although schools have until next year to comply.

On March 7th the Charity Commission, the sector's regulator, published draft guidance on how to satisfy the new requirement. Trustees should say in their annual report just how their school benefited the public during the year, showing that the good they did outweighed the tax breaks and other perks it got as a charity. They should also say specifically how they benefited poor people—those on less than 60% of average income.

Private schools run as charities receive some £100m each year in tax concessions. These include lower business rates, the ability to reclaim income tax on donations and exemption from capital-gains and inheritance taxes. This sum pales, however, when compared with the £2 billion a year the schools save taxpayers by educating around 500,000 children. But the commission says they will have to do more than that.

Private schools must comply. Any that cannot show sufficient public benefit might in extreme cases see their assets used for worthier causes. Nor can a school simply renounce its charitable status and the perks that go with it if it finds the new regime too onerous: assets already amassed by a charity must be used for charitable purposes.

One solution might be to allow local state schools to use facilities such as theatres, swimming pools and playing fields, and even to send some of their students for lessons. But fee-paying schools will probably not be able to avoid offering many more means-tested scholarships. Since only a few of the biggest and oldest have endowments worth mentioning, poor pupils will have to be subsidised by increasing the already-astronomical fees paid by other pupils. A move to open private schools may end up making them even more exclusive.

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Television wars

Lost—for now

Mar 8th 2007
From The Economist print edition

BSkyB's aggressive tactics may be revealing its vulnerability

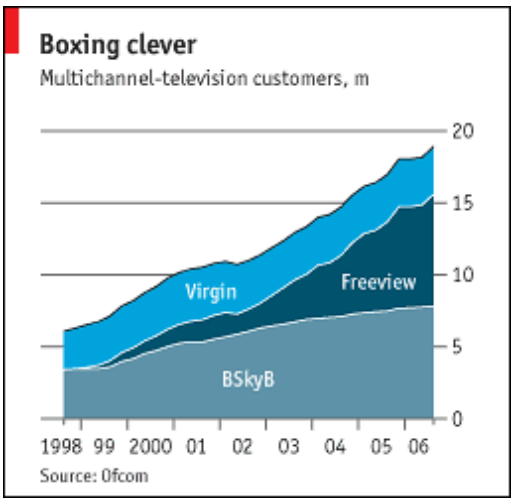
FEW play the scrappy underdog as masterfully as Sir Richard Branson, who despite (or perhaps because of) his wealth, charm and good looks has managed to rally public support in most of his commercial disputes. This week he accused BSkyB, a broadcaster controlled by Rupert Murdoch, of "acting like bully-boys" when it pulled several of its channels from Sir Richard's Virgin Media late last month.

The two parties fell out after BSkyB doubled the price of the channels it provided to Virgin to about £49m ($94m) a year, on Virgin's account. Sir Richard argues that BSkyB, with 8.4m customers to Virgin's 3.3m, is abusing its market power. On March 5th he threatened to take the matter to court. Such threats have done little to mollify Virgin's angry customers, who have lost access to favourite shows including "Lost", "24" and "The Simpsons". Cancellations are thought to have jumped sharply in March.

Sir Richard may have a point, though: BSkyB has been throwing its weight around. In December it cut the fee it pays to transmit some of Virgin's channels to its own subscribers from more than £30m a year to about £5m. Virgin said it accepted the deal because losing access to BSkyB's viewers would have cost it up to £80m a year in advertising revenue. Last month BSkyB said it planned to replace three channels it provides free to Freeview, a terrestrial network offering about 40 channels to viewers who pay only for a digital receiver (a modest £20), with four subscription ones to be broadcast over the same network. And in November it bought a 17.9% stake in ITV, Britain's biggest commercial broadcaster, blocking a mooted takeover by Virgin Media.

These moves suggest that BSkyB's dispute with Virgin is not mainly about the price of its channels, as BSkyB insists. Analysts reckon the latest spat will in fact cost the satellite firm about £60m a year in fees and advertising revenues. The broader issue is how aggressively BSkyB can restrict use of the content it controls in order to boost subscriptions to its satellite service.

Two things are behind this new emphasis. The first is the unexpected rise of Freeview (see chart). The second is that BSkyB is losing its monopoly in some of the sports that have lured subscribers in the past. Regulators have broken up football broadcasting; last year Setanta, an Irish firm, bid successfully for the rights to transmit some English Premier League matches.



Few get the better of the Murdochs, but BSkyB's strategy has its dangers. Its flagship channel has been steadily losing market share (though it still pulls in viewers for its prime-time hits). And its efforts to tie its content to its delivery platform may put it on a collision course with regulators.

Although European competition authorities have been reluctant to force satellite and cable companies to sell their content to rivals (as cable firms in America are required to do), they have hinted at their willingness to do so. In 2002 the Office of Fair Trading, a competition regulator, found that BSkyB dominated the market in sports and movies. The company escaped sanction because it was selling those channels to rivals at a reasonable price.

Now BSkyB may after all have played into Sir Richard's hands. The broadcasting regulator is considering a closer look at general entertainment. If thousands of Virgin's customers move over to BSkyB it would make calls for curbs on BSkyB's market power more credible. If Virgin's customers prove less fickle, Sir Richard will have called BSkyB's bluff, freeing Virgin to spend money on developing its own

channels. Sir Richard may enjoy playing the underdog, but never the fool.

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Marine law

Oil and troubled waters

Mar 8th 2007
From The Economist print edition

An attempt to rationalise marine affairs may shift more powers to Scotland

THE pink sea fan is a rare and rather pretty bony coral that dwells in the warm waters around the south-west of England. Lyme Bay, on the Devon and Dorset coast, is a stronghold, but it is also home to scallop fishermen whose relentless dredging makes life difficult for the coral. Last summer a row broke out between local conservationists and scallop fishermen. The greens wanted to expand two nature reserves set up to protect the pink sea fan into areas that are frequented by the scallop fishermen.

Such arguments are more or less easily solved on land. A local authority or government department says yes or no, and the discontented have a clear avenue for appeal. Nothing is so straightforward at sea, though, where Britons are increasingly busy and often harbour conflicting ambitions for the same places. Instead there is a bureaucratic tangle, with dozens of quangos and ministries holding court but nobody holding the ring.

Take the Robin Rigg offshore wind farm, which is under construction in Scotland's Solway Firth. Building it required one consent from Britain's environment department, DEFRA, and a second from SEERAD, its Scottish equivalent, for the turbines. Local and national offices of DEFRA had to approve the cables tying the wind farm to the national grid, but those linking the turbines required SEERAD's agreement. The Scottish Executive's energy division gave permits for the farm to generate a large amount of electricity. And it took a special private member's bill to forbid sailors from straying through the wind farm.

Such madness has convinced all three main political parties that big changes are needed. After a year of consultation DEFRA expects to publish a white paper outlining the government's thinking on March 15th. It will propose creating a new outfit that gathers the relevant officials under one roof, so they can decide how best to accommodate the marine demands of fishermen, conservationists, wind farmers and everybody else.

Devolution makes things especially complicated, for a large share of Britain's territorial waters lies off Scotland. Sail away from England and you reach France or Ireland before tea; do the same from Scotland and before landfall you will need a sleeping bag and some left-over haggis.

Most marine activities within 12 nautical miles of the Scottish coast are run from Edinburgh. Beyond that, to the 200-mile limit of international waters, London is in charge, except when it isn't. Fishing, for instance, is for the Scottish Executive to regulate even if it happens far out at sea, while oil and gas are organised and taxed from London. That leads to absurdities: the Scottish Executive looks after near-shore nature reserves, but it would not be able to stop a leaky oil tanker from entering them.

Resolving such disputes is tricky without devolving more power. That would suit the Scottish National Party (SNP), which has promised a referendum on independence if it wins in the May elections. Even if it loses, DEFRA's bill is likely to push more powers north of the border.

Negotiations are taking place now about what those extra powers might be. More control over oil and gas is definitely not among them. But Richard Lochhead, the SNP shadow minister for environmental, rural and energy matters, reckons the marine bill is Scotland's best chance to grab more power since devolution itself.

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Bagehot

A surfeit of beef

Mar 8th 2007
From The Economist print edition

Steve O'Brien

Gordon Brown will not be short of policies, but it may not make any difference

HERE are three pieces of conventional political wisdom that are all almost certainly wrong. The first is that Labour will be damaged if Gordon Brown is not tested by a proper contest. The second is that without such a contest the party will have lost its only chance to renew its sense of purpose and direction. The third, frequently repeated by Tony Blair, is that the next election will be decided by who has the best policies.

All of this goes some way to explain the flurry of excitement over the launch last week of a new policy website by Alan Milburn and Charles Clarke, neither of them known for being among Mr Brown's admirers. It has been widely interpreted as a slightly desperate attempt to put pressure on the young environment secretary, David Miliband, to make a late kamikaze run against the chancellor. But what the two former cabinet heavyweights were really saying was that as prime minister-in-waiting Mr Brown had an obligation to open up his thinking to scrutiny well before he takes over.

A week on Mr Miliband shows every sign of continuing to resist the pressure to run. His resolve will have been bolstered by the findings of a YouGov survey this week of Labour members and affiliated trade unionists. It confirmed that, although many do indeed yearn for a contest, Mr Brown is still a shoo-in whoever is put up against him.

The problem that any ardent Blairite must confront is that there are no ideological grounds for taking on Mr Brown: the policy differences that divide him from Mr Blair, although real, are too nuanced and subtle to provide any. Inevitably, therefore, a leadership election would focus on doubts about Mr Brown's personality. He would still win, but both he and the party would almost certainly be damaged in the process.

Messrs Milburn and Clarke were also wrong in suggesting that policy renewal is being neglected and that they are the people to fill the gap. Mr Blair himself launched a comprehensive policy review last autumn, which is now reaching what one insider called its “what does it all mean?” phase. This week's cabinet meeting on March 8th was given over largely to discussion of two big bundles of work that are nearing completion—one on the role of the state and the other on the reform of public services. A third bundle (on

crime, security and justice) was held over. Work continues on three more—Britain and the world, economic dynamism, and energy and the environment.

Although the resources that have been put behind this policy review are substantial, it is understandable that Mr Clarke and Mr Milburn are not impressed. Because they are not a part of it, they regard it as insufficiently open and inclusive. Apparently Mr Milburn wanted to participate but Mr Blair thought his presence would jeopardise Mr Brown's engagement, without which little of lasting value will be achieved.

In fact, for an exercise of its kind, the process has been surprisingly open. Every cabinet minister is involved, and of those junior ministers who have wanted to play a role at least 30 have done so. The steering committee is chaired by Pat McFadden and Ed Miliband, Cabinet Office ministers who are members of the inner circles of, respectively, the prime minister and the chancellor. Led by Mr Blair's strategy unit and the Treasury, papers have been prepared by civil servants across Whitehall.

And finally, the public is being consulted. Last weekend Ipsos MORI, a polling firm, held the first “citizens' summit” at 10 Downing Street to gauge public attitudes on a number of issues. These ranged from the extent to which people want to have power over public services to the kinds of sticks and carrots they would like to see applied to encourage fellow citizens to behave in a socially responsible way. A sense of the importance of “fairness”, particularly in the treatment of the disadvantaged, was one of the themes to emerge.

Meanwhile, on the policy front, according to people close to the process, the prescriptions that are now emerging are quite strong medicine—a little too much so for some cabinet ministers who are also candidates for the deputy leadership and anxious to avoid giving offence. In public-service reform, for example, the main idea is to increase the introduction of market forces in order that those who commission services may choose from a mix of competing state, private and third-sector providers. John Hutton's welfare-reform proposals (see article) are a good example of the “direction of travel”.

Gordon's bunnies

The idea that the government will not have oodles of policy to draw on between now and the next election scarcely seems credible. But there are still two big questions. The first is how far Mr Brown will make use of the work being done. The people in Number 10 have been impressed by his willingness to get involved, but they admit to not knowing what he really thinks. They are used to working with Mr Blair, who responds to things quickly and by instinct. The chancellor is not just more cautious but also more analytical and technocratic. And he is more concerned about political repercussions than a prime minister who has shown signs of being demob-happy for some time.

The second question is how the policy review will tie in with Mr Brown's secret plans for his first 100 days. There are fears that he is obsessed with making an impact by pulling rabbits from hats—a trick that chancellors become addicted to and which strikes some as very old-style politics.

There is also a third question, albeit of a different kind. Mr Blair may say that the next election will be decided by policies, but it very likely won't be. It will be decided, two years from now, on whether the electorate prefers experience to charm and continuity to change. And that's a question to which nobody yet knows the answer.

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Energy and nationalism

Barking louder, biting less

Mar 8th 2007
From The Economist print edition

Angry tub-thumpers in charge of oil-rich states do not always strike the most successful bargains with energy companies

EPA

NEO-COLONIALISM, crude exploitation, plunder, blood-money: no term is too inflammatory, it seems, for critics of Iraq's proposed oil law. If passed in its current form, it will allow Iraq's weak, American-backed government to flog the national patrimony on the cheap, by signing unduly generous contracts with foreign oil firms. At least so the argument goes, especially among radical types who are inclined to write off America's whole strategy in the region as one of mercantilism backed by bombs.

In a similar spirit of stridency, Venezuela is now insisting on renegotiating the few remaining contracts with Western oil firms that it has not already overhauled. In Russia, meanwhile, an increasingly abrasive President Vladimir Putin is making it clear that in future foreign oilmen will not receive as warm a welcome as they did in the 1990s. All around the world, from Algeria to China, governments are changing the terms of investment in oil and gas, on the ground that they are not receiving their fair share of the profits. For critics of capitalism, last year's surge in oil and gas prices seemed to present a long-awaited chance to shift the global balance of power away from corporate behemoths and the governments that are closest to them.

But despite all this huffing and puffing there is no consensus on what constitutes a good deal from the energy-rich state's viewpoint; and countries with the fiercest rhetoric do not always succeed in driving the hardest bargains. The proportion of oil revenue that goes to governments can vary from as much as 90% to as little as 10%, according to Saad Rahim of PFC Energy, a consultancy. And there are many reasons—quite apart from differing levels of nationalist self-assertion—why the picture should be so mixed. Some countries have small or relatively inaccessible reserves, or no known reserves at all, and so have to offer favourable terms to entice foreigners' interest. Other states might seem like risky places to do business of any kind (thanks in some instances to past nationalisations of the oil industry) and must therefore offer preferential terms to woo investors. Others agree to sacrifice some of their take for the sake of creating extra jobs or diversifying the economy.

Governments (including those of rich countries, even the United States) often end up with a reduced share of oil revenue for less edifying reasons, such as sheer incompetence. By their own admission, American civil servants accidentally left a critical clause out of contracts signed in 1998 and 1999 with oil firms drilling in federal waters, doing taxpayers out of as much as $14 billion. The same officials are now

warning Congress that its efforts to recoup the money might cost the government even more, in the form of expensive lawsuits and delays to future payments. Poor countries, with underfunded and corrupt bureaucracies, often have an even harder time keeping oil firms in line.

A common mistake made by energy-rich states is entering short-sighted contracts that take no account of possible changes in the oil price. Venezuela signed the deals it now wants to repudiate in the 1990s, when oil fetched as little as $10 a barrel. At that price, the arduous process of extracting something useful from the country's plentiful deposits of tar-like “heavy oil” was barely profitable. So the government offered to lower the income-tax rate for such projects and levy royalties of just 1%. As the oil price soared over the past few years, those enticements began to seem impossibly munificent.

Russia is another place where circumstances have changed. It was broke and desperate to attract investment in 1994, when it signed a contract with a consortium led by Royal Dutch Shell to develop oil and gas reserves off its Pacific coast. To persuade the investors to take on such a tricky job in a country with such parlous politics, the government agreed to forgo its share of the revenues until they had recouped their costs. But it did not foresee the long delays and near-doubling of projected costs that have afflicted the scheme and pushed back its payday.

Most oil-rich countries are trying to move away from such rigid regimes. But there is little consensus about what should replace them. Many governments are signing contracts with variable terms, so that as the oil price rises, either tax rates rise with it, as happens in Malaysia, or the state-owned oil company's share of production increases, as in Azerbaijan.

Some countries, including Angola, have gone as far as specifying a fixed rate of return on investments, beyond which almost all profits go to the government. But such deals lead inevitably to rows about what counts as a legitimate expense on which a profit should be earned. Angola's contracts for offshore production are structured in such a way that firms actually make more money if projects exceed their budgets—a set-up that can lead to gold-plated cutlery in the staff canteen, according to Graham Kellas of Wood Mackenzie, a research firm. Iran, in contrast, forces foreign contractors to bear almost all the expense of cost overruns—a massive risk for oil firms given the current run-up in the price of both materials and labour throughout the industry.

Nationalist rhetoric often clouds the substance of the issue. After all, Qatar, which has welcomed big Western oil firms with open arms, has managed to secure a greater share of the revenue from its oil and gas than any country in South America, despite all the tub-thumping talk of ending foreign exploitation. Even after Ecuador introduced a windfall profit tax on oil firms last year, it still offers investors bigger profits on each barrel they pump than Alaska, America's biggest oil province, according to Wood Mackenzie's calculations. Recent tax changes in Britain cost oil firms more money than similar measures in Venezuela. In terms of the percentage of future profits gobbled up, Britain's taxmen have been even greedier than Russia's (see chart).

Self-proclaimed “resource nationalists” do not even agree on what the phrase means. Iraqi firebrands insist that any arrangement that gives foreign oil firms a formal claim on any of their country's oil or gas is an unpardonable affront to national sovereignty. Meanwhile Venezuela's President Hugo Chávez is forcing foreign oil firms to migrate to contracts that do just that. The issue is not as arcane as it sounds: foreign oil firms are often willing to pay handsomely not just for the right to pump oil, but also for notional ownership of it, which makes a big difference to their accounts, in America in particular.

Nationalists also tend to encourage state-owned firms to take an ever-larger role in the oil industry, both as a matter of national pride and to build local expertise. But setting up a state-owned oil firm is a big expense in itself. They are rarely as efficient or capable as their private partners, and often run expropriated assets into the ground. After Rosneft, a Russian state-owned oil giant, took over some oilfields from Yukos, a private rival, their output actually fell, although it is now rising again. The Russian state may have reasserted its control over the oil industry, but production, and government revenues, are almost certainly lower than they would have been with greater private investment.

AP

Chávez and Putin: let's flex our muscles

Raising taxes, which Russia has also done, is a simpler and often more effective method of maximising the government's take. Norway, for example, levies a swingeing 78% tax on oil firms' profits. By contrast, its state-owned oil firm, Statoil, manages to recoup only a further 6-7% of the industry's profits by actively investing in wells and rigs.

Perhaps the most elegant option for governments is to ask investors what share of the revenue from any given field they would be willing to surrender, and award production rights to the one that makes the highest offer. In 2005 Libya held such an auction, in which foreign investors agreed to hand over more than 90% of any oil they found in ten of the 23 areas up for grabs.

As those figures suggest, even oil firms themselves are coming round to the idea that the most profitable contracts are not always the best, since revanchist governments are likely to renege on any deal that seems too onerous in hindsight. Many big projects have prospective lifetimes of 20 years or more, and financing arrangements built around such expectations. In such cases, a stingy but predictable regime might be preferable to a lucrative one that suffers from frequent or dramatic revisions. By that measure, the worst place to produce oil is not Russia or Venezuela, according to Mr Rahim, but Britain, which is constantly tinkering with its tax rates.

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Testing Muslim views

If you want my opinion

Mar 8th 2007
From The Economist print edition

It's just about possible to assess the attitudes of the world's Muslims—but much harder to interpret the results

Get article background

BACK in November 2001, as American bombers were driving Afghanistan's Taliban rulers from power, a reporter asked Donald Rumsfeld, then defence secretary, if the campaign was perversely boosting support for the Islamists. His reply was typically tart: it was “very difficult to go down and do a Gallup poll”—so he was “not inclined to chase that rabbit”.

Ever since then the Gallup polling group, based in Washington, DC, and many other research pundits have tried to prove Mr Rumsfeld wrong. They have used all the wizardry of market research to gauge the attitudes of Muslims all over the world—how they see democracy, what they like and dislike about the West, whether they condone terrorism.

And sure enough, some find the bottle of anti-Western extremism half-full, while others find it half-empty. It could hardly be otherwise when so many people on the streets of Cairo or Karachi seem to view the Western world with a confusing mix of awe, jealousy, admiration and resentment. And feelings about the big questions of culture and geopolitics are as ambivalent in the rich world as they are in Muslim states. Take a recent survey (see chart) of 28,000 people in 27 countries for the BBC World Service. Steven Kull of the University of Maryland, who co-produced the research, deduced that most people reject the idea of a “clash of civilisations”. But it would have been easy to draw a pessimistic conclusion: it is not comforting that 51% of Indonesians, or about 100m people, do expect a clash.

Still, however intractable reality may be, pollsters are under pressure to send a clear message. For the newspaper-skimming public, it may often be the spin that distinguishes one poll from another, not the tangled reality that emerges from the numbers. As pollsters know, if they are to hold the attention of busy people, they can't just say, “It's all very complicated.”

Gallup, for example, has in recent weeks put on a media road-show to promote the results of its second in-depth survey of Muslims in mainly Islamic countries. The first was conducted in 2001 and 2002, the follow-up in 2005 and 2006. What the data show is not reassuring to Americans: in most places, the percentage holding “unfavourable views” of the United States has risen—from 64% to 79% in Saudi Arabia, 33% to 62% in Turkey, 41% to 49% in Morocco. (Exceptions do exist: in Iran the figure fell from 63% to 52%.)

What Gallup's analysts have been stressing, however, is a more nuanced point. Muslims of both sexes, while strongly, and often increasingly, attached to their faith and its legal tradition, also say they admire some things about the Western world, including its free speech and democracy. In almost every country that Gallup surveyed, women as well as men thought that *sharia*, Islam's sacred law, should be the main or the sole basis of legislation. But female respondents saw no contradiction between this affirmation and the idea of rights and opportunities for women. A broad conclusion drawn by Gallup's wonks is that to be devoutly religious need not imply rejecting all Western values; and that religiosity is not correlated with

extremism or violence.

A recent survey of British Muslims, commissioned by Policy Exchange, a right-of-centre think-tank, was presented to the public, and interpreted by the media, in almost the opposite spirit. And regardless of spin, there were some startling findings, suggesting that hard-line views are waxing not waning. Some 37% of Muslims aged between 16 and 24 would prefer to live under *sharia* law, against 17% of those over 55. In the younger group, 36% favoured death for those who abandon Islam, versus 19% of the oldies. Approval for groups like al-Qaeda was voiced by 13% of the youngsters and 3% of the old folk.

But Munira Mirza, one of the report's co-authors, felt that some conclusions drawn by the media (that Britain was nurturing a generation of extremists), were overdone. What the polls partly reflected, she thinks, is the alienation of youngsters of all backgrounds: since Muslims have an “alternative narrative”, they jump at the chance to give sharp answers to pollsters.

How can anybody tell? At a technical level, pollsters say the problems they face in a traditional culture—like reluctance to discuss hard questions with strangers—are formidable, but superable. Gallup's field-work consists of hour-long interviews in which the questioner is usually the same sex and nationality as the respondent. “Nothing sensitive can be asked at first, you just work to persuade people there is no right or wrong answer,” says Richard Burkholder, a Gallup researcher.

Another problem in Muslim lands, says Mary McIntosh of Princeton Survey Research, an American firm, is that when women are polled, male relatives insist on listening in and correcting the replies.

But Gallup's chief executive, Jim Clifton, believes that his group's research into Muslim opinion is sound enough to have huge policy implications. “Most political leaders believe a war about religion is going on, when we know it's a war about politics and poverty. Many people say Muslims hate our freedom, but they respect it.”

Mindful of its independence, Gallup declined a proposal from the Pentagon to sponsor its work in Iraq. But no study takes place in a total vacuum; could it be that more innocuous tie-ups affect the way research is presented? Since 2006, Gallup's partner in polling Muslims has been a London-based charity called the Coexist Foundation, whose trustees include a Saudi businessman, Mohammed Jameel, and some senior British Christians and Jews. Its mission is to improve relations between the three faiths and fight prejudice.

With a partner like that, is there a sub-conscious tendency, at least, to accentuate the positive—just as right-of-centre groups may have a stake in showing that multi-cultural policies are failing? Mr Clifton points out that Gallup has an overwhelming interest in guarding its integrity. “We have a name to protect,” he insists. “People may say we appear to be leaning towards the Muslims, but what we are finding is just the truth.” Besides, one consistent Gallup finding is that 8% of Muslims round the world—at least 80m people—strongly support terrorist acts against America. That can hardly be described as “happy talk”.

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Plan B for global warming?

Mar 8th 2007
From The Economist print edition

Environment: “Geo-engineering” is the direct use of technology to counteract climate change. The idea is highly controversial

IF MAN is inadvertently capable of heating the entire planet, surely it is not beyond his wit to cool it down as well? Although most climate scientists do not like to talk about it, cutting greenhouse-gas emissions is not, strictly speaking, the only way to solve the problem of climate change. Just as technology caused the problem, it might also be able to help reverse it. The use of planetary-scale engineering to counteract climate change is known as “geo-engineering”.

The idea has been around for years. When a report on climate change was submitted to President Lyndon Johnson in 1965, the authors did not even bother to consider the idea of reducing carbon-dioxide emissions. Instead, the report suggested spreading “very small reflecting particles” across the ocean surface to reflect light and heat back into space.

Since then most campaigners and policymakers have focused on cutting emissions, but the idea of deliberately cooling the Earth has never gone away. Most people think cutting emissions is the more sensible path. But global emissions are still rising, and seem likely to do so for years to come, so some scientists believe it might be worth thinking about a second line of defence, if only as an insurance policy.

The idea has gained new currency in recent months. *Climate Change*, a scientific journal, published a series of papers on geo-engineering last August, including one by Paul Crutzen, a Nobel prize-winning atmospheric chemist. In November the Carnegie Institution and America's space agency, NASA, held a conference on the topic. And American officials have lobbied for geo-engineering research to be included among the recommendations of the Intergovernmental Panel on Climate Change's latest report on climate-change mitigation.

Of all the schemes proposed, the most ambitious (and expensive) idea would be to place a giant sunshade in space at the inner Lagrange point, the position on the line between the Earth and the sun where the combination of centripetal and gravitational forces allows an object to maintain a constant position between the two. If the object is big enough, it could block out enough of the sun's rays to cool the Earth. Roger Angel, an astronomer at the University of Arizona, has suggested assembling a cloud of millions of small, reflecting spacecraft less than a metre across at this point, where together they would block out 1.8% of the sun's rays.

Dr Angel estimates that the total mass of the sunshade required would be around 20m tonnes. The shade would consist of individual craft around one metre across, put into position using a combination of magnetic launchers and ion propulsion. He believes the total cost of the project would be a few trillion dollars, or less than 0.5% of world GDP. Dr Angel admits that this is a somewhat far-fetched solution, and does not believe it would be attempted unless all other options had failed. But he has been given a

small grant by NASA to explore the idea.

A less exotic approach, endorsed by Dr Crutzen, would be to spread tiny particles in the upper atmosphere to reflect the sun's rays. This effect has already been shown to work in nature: fine sulphate particles, called aerosols, ejected by large volcanic eruptions like that of Mount Pinatubo in 1991, have produced periods of global cooling. And sulphate pollution from industry had similar consequences, helping to balance the warming effects of carbon dioxide until the 1990s, when pollution controls in many regions had the perverse effect of increasing warming.

Ken Caldeira, a scientist at the Carnegie Institution, suggests that this idea might be more suited to local rather than global application, at least at first. The Arctic, for example, is among the regions most affected by global warming, and keeping the polar sea-ice frozen would be a good thing: white ice reflects more heat back into space than dark ocean, and the scheme would also save a few polar bears from drowning.

The most down-to-earth idea is that proposed by John Latham, a scientist at the National Centre for Atmospheric Research in Colorado. He suggests that blasting tiny droplets of seawater into the air would stimulate the formation of highly reflective, low-lying marine cloud. Simulations suggest this would have a substantial cooling effect. The question is how to do it economically. Stephen Salter of the University of Edinburgh has designed an unmanned vessel which would produce these clouds using wind power. Just 50 vessels, he reckons, each costing a few million dollars and spraying around 10kg (22lb) of water per second, could cancel out a year's worth of global carbon-dioxide emissions—though another 50 vessels would be needed every year until carbon-dioxide emissions were under control.

Dr Salter's ships would be much more precise than other geo-engineering schemes—“like an artist's paintbrush”, as he puts it. They could be deployed to the North Atlantic to cool the Greenland ice sheet during the northern summer and then migrate to Antarctica for the southern summer. Dr Caldeira even suggests that by cooling the sea, these ships could be used to combat hurricanes, since high sea-surface temperatures are linked to hurricane formation.

Other proposals include seeding the oceans to get them to absorb more carbon dioxide and building huge reflectors in desert regions to reflect sunlight back into space. This latter idea is impractical, says Dr Caldeira, who reckons that half the world's deserts would have to be covered. Indeed, most geo-engineering schemes sound half-crazy and tend to have both technical and aesthetic complications. Deliberately polluting the stratosphere would make the sky less blue, although sunsets would probably be prettier. Blocking out the sun would help to cool the planet, but it would do little to address other nasty side-effects of high carbon-dioxide levels, such as the acidification of the oceans.

Many greens oppose the whole idea in principle. Ralph Cicerone, president of America's National Academy of Sciences, has said that geo-engineering inspires opposition for “various and sincere reasons that are not wholly scientific”. But it does seem reasonable to worry that the illusory hope of a scientific fix might undermine the adoption of policy solutions, such as carbon caps and carbon quotas, designed to address the underlying cause of the problem. And then there is the danger of unintended consequences. Climate change is arguably an experiment which mankind has unwittingly found itself performing on the planet. To start a second experiment in the hopes of counteracting the first would be risky, to put it mildly.

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Displays to keep an eye on

Mar 8th 2007
From The Economist print edition

Consumer electronics: New displays are starting to appear in consumer devices, offering advantages over today's liquid-crystal screens

The displays they are a-changin'

FROM tiny mobile phones to enormous flat-panel televisions, liquid-crystal displays (LCDs) are everywhere. The technology is cheap, even for large panels—witness the tumbling price of LCD televisions—and can brilliantly display text and graphics. LCDs have made notebook computers possible and have pushed aside the bulky computer monitors of a few years ago. They make it possible to show films on aeroplane seats-backs, play video games on the train and see digital photos right away on the back of a camera.

But LCDs are not perfect. They can be power hungry, tend to produce washed-out images in bright sunlight and are often thick and inflexible. As a result, several other display technologies, each with benefits and drawbacks of their own, are starting to appear in consumer-electronics devices. Some of them could give the LCD a run for its money, at least in some areas, by offering crisper images, brighter colours, thinner screens and lower power consumption.

Electronic-paper displays, first developed in the 1970s, are finally making their way into a number of products. Appropriately enough, Sony and several other manufacturers are using the technology in portable “e-book” devices intended to replace books and newspapers. Colour LCDs are grids of tiny shutters, each of which decides how much light to let through from a “backlight” behind the screen. Electronic paper, conversely, relies on ambient light from the surroundings, just like ink on paper—so electronic-paper displays are sharp and easy to read in bright sunlight. Better still, once the screen has been set to display a page of text, no electrical power is needed to keep it there; power is consumed only when the screen is updated, which can extend the battery life of mobile devices.

The technology is also easy on the eye, says Nico Verplancke of IBBT, a Flemish research institute. Last year he oversaw a trial of electronic-paper technology carried out by *De Tijd*, a Belgian newspaper. The newspaper asked 200 readers to evaluate an electronic edition displayed on the iLiad, a device made by iRex Technologies of Eindhoven, in the Netherlands. Their responses to the display were favourable. “The reading experience was pretty amazing,” says Mr Verplancke. “It was very close to reading normal paper.”

Sony has developed a similar device called the Reader, which went on sale in America last autumn. Like the iLiad, it uses electronic-paper technology from E Ink, based in Cambridge, Massachusetts. E Ink's technology has also been used in the Motofone, Motorola's low-cost mobile phone for the developing world, a Seiko wristwatch, a weather-station and a flash-memory stick. And it will appear in a new mobile device with a five-inch (13cm) roll-up display that will be introduced in Italy later this year. The “Librofonino”, an e-book reader with a cellular connection for receiving information, was developed by Polymer Vision, based in the Netherlands, and will be sold by Telecom Italia.

A second emerging technology is based on organic light-emitting diodes (OLEDs). Such displays, which are based on the electroluminescence of organic compounds, are said to be thinner and brighter than LCDs, and offer wider viewing angles. Since they emit light directly, OLED displays do not need a backlight. So far OLED displays have appeared mostly in small devices such as music players and as the secondary display on the outside of mobile phones. Sales of OLED displays in 2006 reached $615m, says Vinita Jakhanwal of iSuppli, a market-research firm. But the technology is improving and annual sales will

grow to around $3 billion in 2012, she predicts.

The technology's main drawback is that OLED displays only have a lifetime of around 20,000 hours, or a little over two years in continuous use, so they are not yet suitable for use in laptops or TVs. But those working on the technology are optimistic that this problem can be solved. “Every year, the R&D team is making strides,” says Dave Das of Samsung. The South Korean electronics giant is one of the biggest backers of OLED displays.

The firm is already using the technology in some of its mobile phones and music players, and introduced a prototype TV with a 40-inch OLED screen in 2005. Samsung is one of the biggest manufacturers of LCD TVs, but OLED technology could offer better brightness and contrast, and faster response. “It's better at displaying fast-moving images, for example a football game,” says Mr Das.

Another emerging technology, called iMoD, is being developed by Qualcomm, an American firm that developed the CDMA technology that underpins modern mobile phones. The idea is to exploit microscopic mechanical structures that reflect light in such a way that specific wavelengths interfere with each other to create vivid colours, like those of a butterfly's wings. (The name is derived from “interferometric modulator display”.)

Qualcomm says this approach can produce pure, bright colours using very little power. It has demonstrated the technology in prototype form and hopes to license it to handset-makers. Marlene Bourne, an analyst who covers the field of “micro-electromechanical systems”, says iMoD is an impressive technology. As with electronic paper and OLEDs, it is certainly worth keeping an eye on.

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Let's get physical

Mar 8th 2007
From The Economist print edition

Video games: “Exergaming”, which combines on-screen action with physical exercise, shows that gamers need not be couch potatoes

Belle Mellor

IN THE heart of Silicon Valley, not far from Google's headquarters, a new gym aimed at a teenage clientele opened its doors last September. As befits its location, it is an unusually high-tech establishment. As well as the weights and cardiovascular exercise gear, Overtime Fitness has “exergaming” equipment that combines video games with physical exercise. One controller allows ordinary Xbox games to be played using full-body movements: players exert pressure on a padded metal bar, rather than pushing buttons on a plastic controller. With another system, players stand in front of a screen and wear a belt equipped with motion sensors, controlling on-screen action with real-world movements.

The gym's founder is Patrick Ferrell, a veteran of the video-games industry and the man behind both *GamePro* magazine and E3, a long-running gaming tradeshow. As a volunteer sports coach and the father of three teenagers, Mr Ferrell thinks the combination of gaming and exercise has huge potential. “It breaks up the monotony of exercise,” he says.

The origins of exergaming can be traced back to 1989, when Nintendo released two accessories for its Nintendo Entertainment System. The Power Pad was a large plastic platform that plugged into the console and contained 12 pressure sensors on which gamers could step or jump to play sports games such as “World Class Track Meet”. The Power Glove was a glove-like controller that translated various gestures into on-screen movements. Neither sold well.

Then in 1998 Konami, another Japanese games company, released an arcade game called “Dance Dance Revolution” in which players had to dance on an electronic platform, placing their feet as instructed in pre-determined patterns. The game proved very popular and over 90 versions of it have been produced, including versions for home video-game consoles. Playing the game is so physically demanding that it is now being taken seriously as a means of keeping fit.

A study by researchers at the Mayo Clinic in Rochester, Minnesota, published in the journal *Pediatrics* in December, found that exergaming more than doubled players' energy expenditure compared with sedentary gaming, and suggested that it “might be considered for obesity prevention and treatment”. In another study researchers at West Virginia University found that children who played “Dance Dance Revolution” showed “significant improvement in arterial function and fitness levels”.

It is no surprise to find one of the game's many imitators, “In the Groove 2”, in the gaming corner at Overtime Fitness. And nearby is another of Konami's pioneering exergames: “MoCap Boxing”, launched in 2001, in which players shadow-box against an on-screen opponent. (The player's movements are detected using infra-red “motion capture” sensors, which give the game its name.)

In the past few months a similar boxing game has made its way into millions of living rooms, following the introduction of the Wii, Nintendo's latest games console. “Wii Boxing”, like other Wii games, does away with button-pushing and instead incorporates physical movements directly into the gameplay, using the Wii's motion-sensitive wireless controllers. Holding a controller in each hand, players throw punches into the air to control the on-screen action. Similarly, the Wii's tennis, bowling, golf and baseball games require players to act out the physical movements involved in each of those sports, though they do not require as much physical exertion as the boxing game. Some Wii users claim to have lost weight simply through regular playing of its sports games, without otherwise changing their routines.

Michael Pachter, a video-games analyst at Wedbush Morgan Securities, predicts that the Wii will spawn a whole new generation of fitness and calisthenics games, going far beyond existing titles that use dance mats or video cameras (such as the EyeToy, which works with PlayStation consoles) to detect players' actions. The Wii's controller, which can detect far more subtle and complex movements, could be used to record and analyse them too, he suggests.

Not everyone is convinced that the Wii, or gaming set-ups like those found at Overtime Fitness, can have long-term benefits. Susan Zieff, an associate professor of kinesiology at San Francisco State University, says that limited movement and “sporadic kinds of jumping” are no substitute for a real workout. Still, some exercise must be better than none at all.

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Call and response

Mar 8th 2007
From The Economist print edition

Computing: Nobody enjoys telephoning a call centre. Could “chatbot” technology make the experience less painful?

Belle Mellor

WITH their irritating menu trees and endless holding for the next available operator, call centres are one of the bugbears of modern life. Could a dose of software make the experience of dealing with one less painful? Researchers working on conversational software programs, or chatbots, certainly hope so. They aim to supplement and even replace human operators with software that can understand ordinary conversational language, and thus deal with calls more efficiently.

IBM, for example, has developed a “speech analytics” system that listens in to a call-centre conversation and spots keywords and phrases to help the operator handle the caller's query. One of the limiting factors in dealing with a query is how fast the agent can match the caller's problem to a “knowledge base” of thousands of possible solutions, says David Nahamoo, chief technology officer for speech technology at IBM's T.J. Watson Research Centre in Yorktown Heights, New York. The keywords are used to search the knowledge base and quietly make suggestions to the operator, so speeding things up.

Another system developed at IBM, called Sensei, helps to ensure that the caller and operator can understand each other properly by assessing a potential operator's pronunciation, grammar and comprehension. The system has been used to help select candidates for call-centre positions in India, and to train them once they have got the job, says Dr Nahamoo. By assessing and improving operators' ability to speak a second language, Sensei ensures that operators are easy to understand and can deal with callers efficiently. And although the prospect of being interviewed for a job by a piece of software might sound dehumanising, feedback from candidates has in fact been very encouraging, he says. Both of these systems are part of a more general long-term trend towards automating call centres, says Dr Nahamoo. “More and more of the low-level functions are going to be automated,” he suggests.

Rollo Carpenter, a chatbot programmer, hopes to automate the high-level functions too, by developing software that can directly replace human operators. Chatbots have already been used by some companies to provide customer support online via typed conversations. Their understanding of natural language is somewhat limited, but they can answer basic queries. Mr Carpenter wants to combine the flexibility of chatbots with the voice-driven “interactive voice-response” systems used in many call centres to create a chatbot that can hold spoken conversations with callers, at least within a limited field of expertise such as car insurance.

This is an ambitious goal, but Mr Carpenter has the right credentials: he is the winner of the two most recent Loebner prizes, awarded in an annual competition in which human judges try to distinguish between other humans and chatbots in a series of typed conversations. His chatbot, called Jabberwacky, has been trained by analysing over 10m typed conversations held online with visitors to its website (see jabberwacky.com). But for a chatbot to pass itself off as a human agent, more than ten times this number of conversations will be needed, says Mr Carpenter. And where better to get a large volume of conversations to analyse than from a call centre?

Mr Carpenter is now working with a large Japanese call-centre company to develop a chatbot operator. Initially he is using transcripts of conversations to train his software, but once it is able to handle queries reliably, he plans to add speech-recognition and speech-synthesis systems to handle the input and output. Since call-centre conversations tend to be about very specific subjects, this is a far less daunting task than creating a system able to hold arbitrary conversations.

That said, there is more to handling call-centre queries than simply understanding language and looking things up in databases. Sheryl Brahnam, a researcher at Missouri State University in Springfield, suggests that it will also be necessary to program chatbots to deal with verbal abuse. In some cases, she says, companies that have used chatbots to handle online queries have found that when confronted by verbal abuse or sexual innuendo, the chatbots were programmed to respond inappropriately in kind, with insults of their own.

Dr Brahnam has also found that the appearance of the chatbot's on-screen persona, or avatar, has a significant impact on how much abuse is levelled at it. “My study showed that you get more abuse and sexual comments with a white female compared with a white male,” she says. Black female avatars were the most abused of all. This leads Dr Brahnam to question how effective IBM's electronic-elocution lessons will prove to be. Even if two operators are using the same script, she says, some callers may respond differently (or even abusively) depending on the operator's gender or accent.

Never mind the philosophical question of whether it is wrong to insult a machine. To neutralise such situations, chatbots must be able to handle verbal abuse constructively, says Dr Brahnam. She is now devising ways to program chatbots with the sorts of rules that human operators use. There are two broad approaches. The first is a “three strikes and you're out” approach in which the chatbot repeatedly warns the customer to stop being abusive, and eventually hangs up or passes the call over to a human manager. The second approach is more psychological. Giving some ground to customers and acknowledging that they have been wronged, and that their frustration is legitimate and understandable, can help to restore calm and allow the call to proceed.

Chatbots may well be able to speed up the handling of call-centre enquiries. But the same technology could also make things worse, if it is unable to understand callers or gives inappropriate responses. Dr Nahamoo says he doubts that call centres will ever be completely automated, because there will always be some queries that demand human intervention. “There's a balance between cost and customer experience,” he suggests, somewhat diplomatically.

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Working the crowd

Mar 8th 2007
From The Economist print edition

Online advertising: New business models let communities of internet users control how their personal information is bought and sold

Alamy

They want their share

WIKINOMICS? Crowdsourcing? Mass collaboration? “Long tail” marketing? Nobody is quite sure what to call it, but lots of people are interested in the way the internet makes it possible for people to organise themselves according to their preferences and habits into tiny niches, access to which can then be bought and sold.

This is unquestionably a huge market—it is, after all, what Google does. Users of the internet giant's search engine and e-mail service provide information about their interests in the form of search terms and e-mail messages. Google is then able to gather up the handful of people who express an interest in an obscure term and provide advertisers with a way to reach them. In effect, Google users trade personal information in return for free use of Google's online services.

But some people think this is a bad deal. They think the personal information is worth far more than the services that Google and others offer in return. Seth Goldstein, a serial entrepreneur based in San Francisco, believes that the personal information contained in users' click trails, online chats and transactions is something they ought to take hold of and sell themselves, generating direct payback. “Attention is a valuable resource, and we're getting to the point where it can be parsed in real time,” he says. So he has co-founded a new venture called AttentionTrust.

Its approach is to turn the tables on Google and other big aggregators of personal information. Instead, users amass their own traffic patterns and preferences using a piece of “plug-in” software that runs inside a web browser. The resulting profile can then be deposited in an online vault, where interested parties can pay to see it. Prices can be structured on a sliding scale, depending on whether an advertiser or company wants to contact individuals or analyse demographic slices—graduates of the same age from the same university who share an interest, for example.

This type of grassroots self-marketing is also the idea behind GestureBank, another anonymised data-aggregation tool started by Steve Gillmor, an American technology commentator. Users will be able to make “a hell of a lot of money,” Mr Gillmor predicts, by deciding which aspects of their behavioural data go into a central pool. He imagines such services will initially take hold among bloggers, who love analysing how many readers they have, who they are, and how their readership compares with that of other bloggers. Before long, he hopes, advertisers will follow with their chequebooks.

Yet another example, established by a group of Stanford graduates, is Agloco. “Advertisers, search

providers and online retailers are paying billions to reach you while you surf," says its website. "How much of that money are you getting? You deserve a piece of the action." Like AttentionTrust, Agloco is based on a browser plug-in that tracks users' online activity and then uses this information to allow advertisers to target people with specific interests. Agloco promises to return 90% of ad revenue, sales commissions and other income to its users. In a further twist, those who recruit other users get a cut of the revenue, too. Akshay Mavani of Agloco says the firm is on target to sign up 10m users by July.

A related approach sets out to address the problem of junk e-mail. Rather than using blacklists and filters to stop unwanted messages reaching their in-boxes, why not charge advertisers for permission to send promotional messages? That is the philosophy behind Boxbe, a start-up based in San Francisco that recently secured funding from Draper Fisher Jurvetson, a renowned venture-capital firm, for its "negotiated e-mail delivery" service. It works rather like an automatic tollbooth between the internet and your in-box, deciding which traffic to let through, and how much to charge.

Boxbe suggests that users set a price of $0.15-0.25 per message to allow companies to contact them. (The start-up takes a 25% cut.) Users fill out a personal profile and the idea is that Boxbe will be able to sign up enough users to offer a critical mass to advertisers, who will then pay to send messages to the users most likely to be interested in them. Advertisers can target messages more easily and users receive fewer irrelevant e-mails. They also get paid. An average user could make over $100 a year, reckons Thede Loder, Boxbe's founder. "It's like picking up a quarter from the sidewalk. Even rich people do it, and it adds up," he says. The idea for Boxbe grew out of his graduate research into the economics of communications, and of spam in particular.

All of these models enable online groups of users to organise themselves into niches and charge advertisers for access to them. But sometimes the transactions can take place within the groups themselves. That is how eBay works: it brings together people so that they can buy and sell things, with the online-auction giant taking a cut of each transaction. Once again, new bottom-up models are emerging that do similar things.

A good example is Threadless, an online T-shirt firm based in Chicago. It sees itself as a community in which members can upload T-shirt art, vote for the most promising designs and order them. The company has about half a million registered users and receives 600 submissions for new T-shirts a week. Each week's winning design wins a $2,000 prize, and several thousand people end up ordering it. As the community grows, so the size of the prize, which initially started at $50, will continue to grow too, says Jeffrey Kalmikoff of Threadless. The firm is considering rewarding the thousands of members who vote each week as well, because they provide valuable insights into market trends that help the company with research and planning. This model could work in any industry, Mr Kalmikoff believes. "I am convinced Detroit could use it for designing cars," he says.

But big firms seem to be reluctant to share control, and rewards, with the masses. Two researchers at Microsoft, for instance, created a stir recently with a scientific paper describing a scheme in which owners of portable music-players could share songs wirelessly with strangers, earning a small commission if such sharing prompted others to buy the music for themselves. Music fans could thus become promoters and micro-resellers for their favourite artists.

Rumour had it that this scheme would be included in Microsoft's Zune music-player, but it was not (though the Zune does allow person-to-person sharing within limits). Nor does Microsoft allow the researchers to elaborate on their vision for a "long tail" alive with the sound of music and money.

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Beyond the stagecoach

Mar 8th 2007
From The Economist print edition

Transport: Fans of "personal rapid transport" claim that nifty individual pods are the future of public transport—again

Advanced Transport Systems

THE fundamentals of public transport, complains Martin Lowson, an academic and entrepreneur, have not changed very much since the era of the stagecoach. Passengers wait at an arranged point for a large vehicle to arrive. It then carries them, along with a crowd of strangers, along a fixed route. The meandering course and frequent stops make the trip far slower than it would be in a private vehicle and the odd-looking person sitting opposite makes it less pleasant. But Dr Lowson's firm, Advanced Transport Systems, thinks it knows how to overcome all this—and give public transport its biggest overhaul in three centuries—using a concept known as personal rapid transit, or PRT.

PRT still involves stations, but they would be smaller and more closely spaced than in traditional transit systems. Instead of big trains or buses, passengers would board small, driverless pods, for one to four people, which would travel along narrow tracks or elevated rails. The stations would not lie on the main line, but on bypasses, allowing pods to proceed directly to their final destination without any stops. It is the stuff of science-fiction films: carefree passengers whizzing effortlessly around in gleaming, automated capsules, without any fear of traffic jams, pickpockets or breakdowns.

In theory, such a system could carry as many people as a more conventional light-rail network or bus service, at lower cost. Since the pods would be much smaller and lighter than trains, they could run on flimsier rails, which would be cheaper to construct. Since they are automated, they could travel much closer together than manually driven vehicles and so get lots of people moving quickly. And since the pods operate only on demand, no money would be wasted on under-used or redundant services.

Since the 1950s, visionaries (or dreamers, depending on your point of view) have been touting PRT as the most efficient way to move people around smallish cities and big public spaces such as airports and fairgrounds. In 1972 Richard Nixon insisted that if American ingenuity could transport three men 200,000 miles to the moon, it could also find a better way to transport 200,000 men three miles to work. The answer, he thought, was PRT. To prove it, he pushed through the construction of a demonstration system at the University of West Virginia. French, German and Japanese firms also built prototypes.

But in the end the model project in West Virginia was the only system to get up and running. The cost of construction, originally estimated at $14m, ballooned to $126m. Rising costs and subsiding political support sank all the other projects. In the 1990s, for example, Raytheon, an American military engineering firm, had to scrap a proposed PRT scheme near Chicago when the projected costs topped $30m per kilometre.

Dr Lowson argues that things are different now, thanks to advances in engineering and computing. Almost all the elements needed for a PRT scheme can be bought off the shelf, he argues, and relatively

cheaply too. He estimates costs for Advanced Transport Systems' PRT scheme, called ULTra, at just £3m-5m ($6m-10m) per kilometre, in part because it runs at ground level where possible. That is comparable, he says, to the cost of building a dedicated bus lane. The operating costs are 40% lower than those of a bus service, since there are no drivers. What is more, ULTra, with its narrow rails and compact pods, takes up much less space than a bus lane or train track does.

BAA, the firm that operates Heathrow and several other British airports, is convinced. It has not only ordered a PRT system to carry passengers between Heathrow's new terminal and the surrounding car parks, but has also bought a 25% stake in Advanced Transport Systems. The project, due to start operating next year, will have five stations and carry 250,000 people a year. If it proves a success, BAA might expand the service throughout the airport, to carry as many as 3m people a year.

Meanwhile, various other schemes are gaining momentum. Vectus, a division of POSCO, a Korean steelmaker, is building a test track for its PRT system in Sweden. A Dutch firm called 2getthere operates automated PRT-like buses in a suburb of Rotterdam and at Schiphol airport near Amsterdam, although PRT purists dislike them since they run on ordinary roads rather than dedicated tracks. Half a dozen other firms are marketing variants on the same theme.

There are still plenty of sceptics, however. Some argue that it would be dangerous to run pods close enough together, at high enough speeds, to eke enough capacity out of each line. The expense of buying rights of way in busy towns could push up costs. Other critics contend that the tracks will be eyesores, especially if they are elevated.

The local politicians who have the final say on most proposals certainly seem to worry that PRT will not live up to its promise. The European Commission has studied four potential schemes, and concluded that hesitant local authorities are the only significant obstacle. As Dr Lowson puts it, “No one ever got fired for proposing a bus system.”

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Three wheels good?

Mar 8th 2007
From The Economist print edition

Bombadier

Is it the next snowmobile—or the next Segway? Bombardier Recreational Products, based in Quebec, has spent C$225m ($195m) over 11 years developing the Can-Am Spyder Roadster, a three-wheeled motor vehicle. When it goes on sale later this year the $15,000 Spyder will be aimed at baby-boomers who like the idea of riding al fresco but do not feel comfortable on a two-wheeler, says Jose Boisjoli, BRP's boss. The Y-shaped wheel layout ensures greater stability, and the Spyder is loaded with high-tech features, such as stability control and electronic brake-force distribution, that are usually found in luxury cars. It is fun to drive, though it is too wide to squeeze between lanes in traffic and guzzles more fuel than a motorbike. Mr Boisjoli admits that his firm has no idea how much demand there will be for the Spyder. But BRP has a good record, having previously developed breakthrough products including the Ski-doo snowmobile and the Sea-doo “personal watercraft”. Even so, as the Segway shows, pioneering a new type of vehicle can be risky.

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Big Brother just wants to help

Mar 8th 2007
From The Economist print edition

Software: The use of data mining by governments need not be sinister, and could help to deliver public services more efficiently

Belle Mellor

WHEN you order books from an online bookstore or buy groceries from a supermarket's website, the personalised book suggestions that pop up, and the reminder that you normally buy milk, are generated by data-mining software that analyses buying habits. The use of such technology by retailers is commonplace. But now governments are adopting it too, in fields from education to tax collection, in order to plan, implement and assess new policies. “Not only do firms like Tesco have good operational systems that control their costs, but they understand their customers and can offer particular product mixes which are attractive to certain groups,” says Peter Dorrington of SAS, one of the biggest providers of data-mining and analysis software. Why, he asks, shouldn't governments do the same?

After all, government policies, like a supermarket's special offers, are designed to meet the needs of particular subsets of the population. Using data-mining tools, it is possible to spot trends and optimise processes. Take, for example, the British government's efforts to encourage more people from poor backgrounds to go to university. The government gives universities extra funds if they recruit and retain students from poor backgrounds. The Universities and Careers Admission Service (UCAS) categorises the 2m university applications it processes each year by age, gender, ethnic origin, parental occupation, domicile, and the desired institution and course. Universities use this data when selecting candidates and the government uses it to see how its policy is working and to assess the effects of changes in policy.

Last year UCAS tested the use of data-mining software from SAS to evaluate applicants' suitability for courses based on their personal statements and references. For a set of applicants—those who had applied for medical school in recent years—the text from these documents was analysed to look for keywords such as “patient”, “experience”, “hospital” and “team” that might indicate that applicants had relevant experience and other signs of commitment. Data-mining software then looked for links between the occurrence of these keywords and outcomes, such as whether an applicant was accepted on a course or whether that applicant completed the course. If such links can be reliably identified, it would enable universities to select students who are most likely to complete a given course irrespective of their socio-economic backgrounds. That could help to reduce discrimination against poorer applicants, who may be regarded as bad risks by universities.

Similarly, a number of school districts in American states including Iowa, New York, Alabama, Colorado and Minnesota are using data-mining tools from SPSS, another software firm, to analyse students' records and spot trends in order to meet the requirements of the No Child Left Behind Act. These are relatively small projects so far, but could easily be scaled up. Big commercial users of SPSS's software, such as telecoms firms, use it to analyse databases of over 40m customers, says Colin Shearer of SPSS. So there is no technical reason why large government databases cannot be mined for insights.

One of the largest government systems to employ data mining is Centrelink, Australia's benefits agency, which deals with over 6.4m claimants and carries out more than 5 billion computerised transactions a year. Centrelink already has a predictive model, called the Job Seekers' Classification Instrument, which evaluates benefit claimants and assesses the risk that they will become long-term unemployed. Claimants thought to be at high risk are then given more help in finding a new job. The agency is now planning a scheme to test the use of data mining to identify fraudulent claimants. The inspiration comes from insurance companies, which use predictive risk models (developed from thousands of claim

histories) to analyse claims. Low-risk claims are paid quickly, and high-risk claims are investigated further. Similarly, Centrelink plans to use data mining to identify claimants for whom further investigation is merited.

Tax agencies around the world already mine data to look for possible fraud. But a more recent trend is text-mining to help taxpayers avoid errors. Sweden's tax authority is using SPSS's software to analyse the patterns of mistakes in tax returns so as to provide better guidance and improve the design of tax forms. And Australia's tax office is employing SAS tools to sort queries from taxpayers who are uncertain whether the rules apply to them or not. The office can then supply taxpayers with the right information—and learn which parts of the tax code are causing the most confusion. Data-mining software is also used by Denmark's National Board of Health, France's benefits agency, the South African treasury and Belgium's finance ministry for performance measurement and policy planning.

All of these schemes use data mining in an effort to improve the delivery of public services. But despite the good intentions, the collection and analysis of personal data by governments inevitably raises Big Brotherish concerns over civil liberties. In Britain, for example, the National Health Service is establishing a national database so that the most important data about patients can be called up by any hospital in the country. But many family doctors are refusing to hand over records, which are now kept in local surgeries, because to do so would break patient confidentiality. Liberty, a human-rights campaign group, worries that data collected by one arm of government will be made available to others.

Another worry is that data mining could prove counterproductive. “Those at the more vulnerable end of the social scale are likely to stop seeking advice and help if they know that the information will be noted and generally available,” says Gareth Crossman of Liberty. Yet another concern is that data-mining and classification schemes can get things wrong. The American Civil Liberties Union, for example, is worried about the Automated Tracking System, an American security scheme that uses data mining to assign a risk score to anyone who enters the country. If a model labels someone as high-risk, there is no way to find out why or to challenge the label.

Dr Paul Henman from the University of Queensland, who has written extensively on the subject, raises a rather more philosophical objection to government data-mining: that the technology starts to transform the nature of government itself, so that the population is seen as a collection of sub-populations with different risk profiles—based on factors such as education, health, ethnic origin, gender and so on—rather than a single social body. He worries that this undermines social cohesion. “A key principle in liberal democracies is that we are all peers and equal before the law,” he says. But for proponents of the technology, such segmentation is the whole point: policies, like supermarket special offers, are often aimed at groups—and the more accurately they can be targeted, the better.

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The slow death of dial-up

Mar 8th 2007
From The Economist print edition

The internet: The spread of broadband connections heralds the demise of dial-up access. But it will take a long time to die

Belle Mellor

“WHO would have thought that the distorted screams of two modems introducing themselves would come to symbolise the dawn of the greatest communications medium ever invented?” muses Sky Dayton, who founded EarthLink, an internet-access provider, in 1994. In the early days of the internet, only a lucky few in business, government and academia enjoyed permanent access to the network; most people, including Mr Dayton's customers at the time, had to put up with slow, temporary links via dial-up modems.

The rise of broadband connections in recent years means that such modems are now in retreat. South Korea was the first country in which broadband subscribers exceeded dial-up users, back in 2000, says Taylor Reynolds, an analyst at the OECD. Broadband overtook dial-up within OECD countries, and probably worldwide, in 2005. According to the International Telecommunication Union, broadband accounted for 56% of global internet subscriptions by the end of 2005.

But even though the dial-up modem is clearly on the way out, it will take a long time to die. “The rumour of dial-up's death has been greatly exaggerated,” says Bernd Lienhard of Conexant, a company that is the leading supplier of analogue modem components. He would say that. But his firm will ship its billionth set of modem chips this year, a milestone that highlights the modem's continued role in keeping the world connected. Dial-up has life in it as a lowest common denominator and will linger on, even in the developed world, particularly among the rural, the elderly and the contrary—those too far from telephone exchanges for broadband, too timid to change, or all too happy with dial-up's limited speed.

For internet users in rural areas, dial-up may be the only affordable way to get online. (Satellite-based broadband access tends to be much more expensive, and coverage of terrestrial wireless-broadband technologies, such as WiMax, is still very limited.) For their part, elderly users who rely on dial-up access may see little reason to upgrade to broadband. “By dint of their behavioural patterns, they don't have big demands for extra speed,” says John Horrigan, the associate director of the Pew Internet & American Life Project, a non-profit research body.

That could change as broadband access is increasingly bundled together with telephone service at little or no extra cost, says Steve Weller of uSwitch, a British service-comparison website. In Britain, for example, combined telephone and broadband bundles are now available for as little as £11 ($21) per month. As broadband is bundled and becomes even cheaper than dial-up, he expects more older surfers to switch.

Contrary users may choose to remain on dial-up simply because the slow speed and intermittent

connection provides a bulwark against the fast-moving online world. “There is a sizeable minority that stubbornly clings to dial-up,” says John Navas, who maintains an extensive list of “frequently asked questions” about modems with corresponding answers on the web (see modemfaq.home.att.net). In yet another sign of the dial-up modem's inexorable decline, Mr Navas says that the traffic to this site has fallen from around 1.5m to 150,000 page views per year over the past four years.

Some people also prefer dial-up because they are not comfortable with the idea of an always-on broadband connection, says Daryle Brown of US Robotics, a maker of modems and other peripherals. They worry about people being able to “hack in through the ether,” he says. Using a dial-up link certainly makes it less likely that a computer will be compromised. But it also makes downloading of multi-megabyte security patches and software updates almost impossible.

As with the AK47 rifle and the Jeep, resiliency is one of the dial-up modem's saving graces. Even the worst phone line can be enough to maintain a meagre but consistent data connection, sometimes at rates as low as 300 baud (bits per second)—a term that is unknown to most people under 30. Modems are also incredibly cheap, costing $2-5 to build into a computer. That highlights another area where dial-up will live on, at least for a while: among those who venture off the beaten track (in other words, to hotels without broadband, Wi-Fi, or a nearby internet café). “It's still the most ubiquitous offering that's out there,” says Ken Denman, the boss of iPass, a firm that provides dial-up and Wi-Fi links for millions of corporate road warriors.

The high-pitched shrieking of dial-up modems, once the herald of a new digital age, now increasingly evokes a bygone era. It may even make some users feel nostalgic. But only up to a point. “It's not likely that you're ever going to see dial-up hobbyist clubs,” says Dr Horrigan.

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Bright sparks

Mar 8th 2007
From The Economist print edition

Alamy

Innovation Awards: We invite nominations for our annual prizes recognising innovators

THE *Economist*'s sixth annual Innovation Summit will take place in London on October 19th. Speakers from industry and academia will examine the latest trends in the management of innovation, from the laboratory to the marketplace. At an awards ceremony on October 18th, we will also honour successful innovators in a range of fields.

Accordingly, readers are invited to nominate outstanding innovators in seven categories: bioscience; energy and the environment; computing and telecoms; “no boundaries” (which includes materials science, nanotechnology and other emerging fields); consumer products; business processes; and social and economic innovation, a category that recognises individuals who have pioneered novel technologies and business models that improve everyday lives.

Nominees should be people, not companies, who are responsible for an innovation that has been a proven success in the past decade. Please e-mail nominations to innovation@economist.com, giving the nominee's name, current affiliation and contact information, and a 100-word summary explaining why the nominee deserves to win the award in a particular category. The submissions will be judged by a panel of technology and business experts, including several previous winners. The deadline for nominations is April 10th.

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Energy

Woodstock revisited

Mar 8th 2007
From The Economist print edition

Derek Bacon

Could new techniques for producing ethanol make old-fashioned trees the biofuel of the future?

MANKIND has used trees as a source of fuel for thousands of years. But now the notion of exploiting trees for fuel is being updated with a high-tech twist. The idea is to make ethanol, a biofuel that usually comes from maize (corn) or sugar cane, from trees instead. Politicians and environmentalists are embracing ethanol for a number of reasons. Unlike oil, ethanol is renewable: to make more of it, you grow more crops. And blending ethanol into ordinary petrol, or burning it directly in special “flex-fuel” engines, reduces greenhouse-gas emissions.

Why use trees, rather than maize or sugar cane, as a feedstock for ethanol? Because “treethanol” has the potential to be much more energy efficient. The ratio of the energy yielded by a given amount of ethanol to the energy needed to produce it is called the “energy balance”. The energy balance for ethanol made from maize is the subject of much controversy, but America's energy department puts it at 1.3; in other words, the ethanol yields 30% more energy than was needed to produce it. For ethanol made from sugar cane in Brazil, the energy balance is 8.3, according to the International Energy Agency.

But for ethanol made from trees, grasses and other types of biomass which contain a lot of cellulose, the energy balance can be as high as 16, at least in theory. In practice the problem is that producing such “cellulosic” ethanol is much more difficult and expensive than producing it from other crops. But the science, technology and economics of treethanol are changing fast. Researchers are racing to develop ways to chip, ferment, distil and refine wood quickly and cheaply.

Interest in cellulosic ethanol is growing as the drawbacks of making ethanol from maize and sugar become apparent. Both are important food crops, and as ethanol production is stepped up around the world, greater demand is driving up the prices of everything from animal feed to cola and biscuits. The price of a bushel of corn rose by 70% between September 2006 and January 2007 to reach its highest level in a decade. Mexico's president, Felipe Calderón, even capped the price of corn tortillas in January as America's fast-growing ethanol industry caused prices to rocket. There are clear signs of a backlash against ethanol made from food crops. Supply is struggling to keep up, and as more governments introduce schemes to promote biofuels and cut greenhouse-gas emissions, the tension between food and fuel will only intensify.

Growing maize requires a lot of land, water and agrichemicals, so environmental groups such as America's Natural Resources Defence Council argue that it is merely a short-term, first-generation approach to making ethanol. Most energy experts reckon that using maize-based ethanol as a substitute

for petrol can reduce America's demand for petrol by 10-15% at best. As for sugar, its growing value as a biofuel feedstock means that in Brazil, which is now one of the world's largest producers and exporters of ethanol, there is pressure to flatten rainforests to make more room for sugar production. One green objective (reducing dependency on fossil fuels) thus conflicts with another (preserving the environment).

Trees to the rescue

Cellulosic ethanol would address many of these problems. Writing in the *Wall Street Journal* recently, Vinod Khosla—a Silicon Valley venture capitalist who has made a fortune by spotting opportunities in fields from biotechnology to software—argued that America needs "cellulosic biofuels to win the war on oil...we must encourage research on biomass feedstocks, tomorrow's energy crops."

Trees are a particularly promising feedstock because they grow all year round, require vastly less fertiliser and water and contain far more carbohydrates (the chemical precursors of ethanol) than food crops do. Ethanol is the result of the fermentation of sugars, which is why it can be so simply and efficiently made from sugar cane. Making ethanol from maize is a bit more complicated: the kernels are ground into flour and mixed with water, and enzymes are added to break the carbohydrates from the maize down into sugars, which can then be fermented into ethanol. Making ethanol from cellulosic feedstocks is harder still, however, since it involves breaking down the tough, winding chains of cellulose and hemicellulose from the walls of plant cells to liberate the sugars. This can be done using a cocktail of five or six enzymes, says Edward Shonsey, the boss of Diversa, a biotech firm based in San Diego. The problem is that although such enzymes exist, they are expensive. It is no use being able to produce ethanol from trees if it costs $5 a gallon.

The lure of bioprospecting

So if cellulosic ethanol is to live up to its promise, researchers will have to find cheaper and more efficient enzymes. Grass, trees and other biomass feedstocks consist of a mixture of cellulose, hemicellulose and lignin, a tough material that helps plants keep their shape. Two large producers of industrial enzymes—Genencor, an American firm, and Novozymes, from Denmark—are working to reduce the cost of cellulase enzymes, which can break down cellulose, to below $0.10 per gallon of ethanol. For its part, Diversa is developing enzymes capable of breaking down hemicellulose. One approach, says Mr Shonsey, is to tweak the structure of existing enzymes to try to make them work better. Another approach is "bio-prospecting"—looking for natural enzymes in unusual places, such as in the stomachs of wood-eating termites.

Treethanol has particular appeal in countries that have a lot of trees and import a lot of fossil fuel. Top of the list is New Zealand: in 2005 the country exported lumber worth NZ$411m ($290m) and imported fossil fuel costing NZ$4.5 billion. In January two of New Zealand's Crown Research Institutes, Scion and AgResearch, announced a research partnership with Diversa. The aim is to investigate the feasibility of producing enough ethanol from trees to fuel all the vehicles on New Zealand's roads without fossil-fuel imports—in other words, to make the country self-sufficient in energy.

Derek Bacon

BioJoule, a start-up based in Auckland, New Zealand, is planning to build a pilot plant to produce ethanol from a type of willow. The idea, says James Watson, BioJoule's co-founder, is that farmers would grow coppiced willow trees which could be processed into wood chips and then transported to a conversion plant to be turned into ethanol. The process would produce two useful by-products: unsulphonated lignin, a commercially valuable polymer, and xylose, a type of wood sugar used in dyeing and in foods for diabetics. Selling these by-products, Mr Watson calculates, means his plant should be able to produce ethanol for a direct cost of $1.13 per gallon, which compares favourably with ethanol from American maize ($1.44) and is not much more than Brazilian sugar-cane ($0.95).

Because willows are fast-growing and can thrive even on nutrient-poor soils, BioJoule's technology could also be used in other parts of the world where there is strong demand for energy, but the soil is not suitable for food crops. Mr Watson thinks China and India look promising.

"Treethanol has particular appeal in countries that

Another country keen on cellulosic ethanol is Sweden, which is relying heavily upon wood-based solid and liquid biofuels as part of its plan to wean itself off oil by 2020. But where New Zealanders favour willows, the Swedes prefer poplars, since they are abundant and their biology is well understood, says Mats Johnson of SweTree Technologies, based in Umea in northern Sweden.

have a lot of trees and import a lot of fossil fuel, such as New Zealand and Sweden."

Even if the right cocktails of enzymes can be found, sceptics say treethanol will still have several problems to overcome. In particular, trees take much longer to grow than grass or food crops—so it might make more sense to make cellulosic ethanol from fast-growing grasses, or the leftover biomass from food crops. Some environmentalists worry that having struggled for years to protect forests from overexploitation, demand for biofuels could undermine their efforts.

And now for Frankentreethanol

One idea is to create new, fast-growing trees to address this problem, either through careful breeding or genetic modification. A team led by Vincent Chiang, a biologist at North Carolina State University, is investigating the production of ethanol from genetically modified trees, with funding from America's Department of Agriculture. "Our preliminary results clearly point out that transgenic wood can drastically improve ethanol-production economics," says Dr Chiang.

A tree's rate of growth is limited by its lignin structure, which is what determines the tree's strength and form. Trees containing less lignin and more cellulose would both grow faster and also produce more ethanol. Some transgenic trees of this kind are being tested in America. Dr Chiang and his colleagues are also looking at ways to modulate the genes that determine the structure of a tree's sugar-containing hemicelluloses in order to make the breakdown and fermentation processes more efficient.

But Steven Strauss, a forest biologist at Oregon State University, says that because of the great genetic variation in willows and poplars, genetic modification may not be necessary. By screening existing varieties it ought to be possible to identify those well suited to ethanol production. Conventional breeding and cloning are very efficient when there is such a variety of species and hybrids to choose from, he says, and the tight regulation of genetically modified organisms makes using the technology expensive and time consuming.

Hundreds of thousands of years ago, when man first gained mastery over fire, wood was his primary fuel. In the past few centuries fossil fuels have risen to prominence, with calamitous consequences for the world's climate. A diversity of new fuels and energy sources seems the most likely future. It would be fitting if humanity's portfolio of new energy technologies had a place for wood, the oldest of them all.

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Go with the flow

Mar 8th 2007
From The Economist print edition

Visualisation: Data from mobile-phone networks can create maps that show how people are moving around

WHERE is everybody? Being able to monitor the flow of people around a city in real time would provide invaluable information to urban planners, transport authorities, traffic engineers and even some businesses. Bus timetables could take account of hourly or daily variations; advertisers would be able to tell which billboards were most valuable. Such information can be collected via traffic helicopters, roadside cameras, police patrols, sensors embedded in roads, tracking units in vehicles, data from public-transport turnstiles and surveys. But the resulting picture is often inadequate, expensive—or both.

Map showing the distribution of mobile-phone users (and hence people) around Rome's Termini station

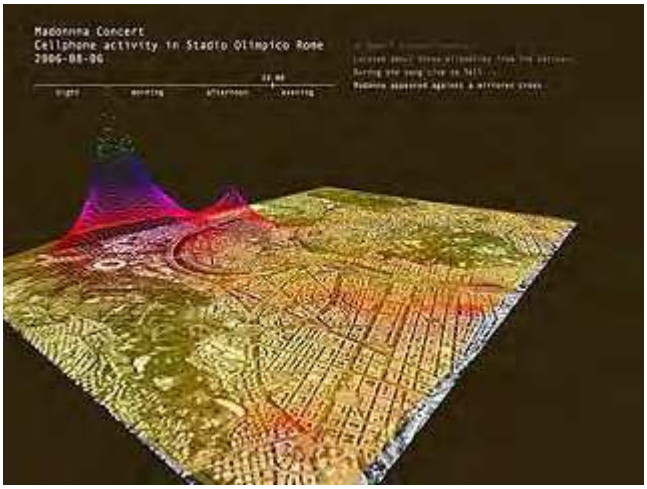
A new scheme devised by researchers at Massachusetts Institute of Technology (MIT) takes a different approach. Given that almost everyone in the developed world now carries a mobile phone, why not use the data from mobile-phone networks? Such networks have to keep track of where subscribers are, as they roam from cell to cell, in order to route calls and text messages. The MIT researchers have been testing the idea using anonymised data from two European operators, Telecom Italia and Mobilkom Austria, to analyse where mobile phones (and therefore people) are at any given moment.

The results take the form of luminous maps adorned with moving and colour-coded arrows, dots and patches of light that indicate the speed and population density of people in the city in question, with an accuracy down to a dozen or so metres. “You see how the city is pulsating,” says Carlo Ratti, who is leading the research as head of the SENSEable City Laboratory at MIT.

The new approach has a number of advantages over other methods. Sensors embedded in streets can accurately count vehicles, for example, but cannot count passengers or detect pedestrians and cyclists. Sensors and cameras also fail to provide “origin-destination” (OD) statistics—jargon for information about where people are travelling to and from, and how long their journeys take. Such information is usually collated using surveys, which are very expensive to carry out. Using data from phone networks promises to be much cheaper. “It's pretty simple: you just need a digital map and you show the data,” says Hannes Ametsreiter, head of marketing at Mobilkom Austria, which is working with MIT to map the city of Graz. “This could be an opportunity for us.”

With markets becoming saturated and mobile operators' revenue-growth slowing—there are already 112 mobile devices for every 100 Austrians, for example—providing information about travel patterns could be a lucrative opportunity for telecoms firms. One potential customer is Seat, a firm based in Milan that

provides real-time traffic maps that drivers keen to avoid traffic jams can call up on the internet before setting out. The company gathers information from roadside cameras, Italy's national toll-road operator, the police, and satellite-tracking systems installed in more than 220,000 vehicles across Italy. All this costs a lot of money and provides only a partial picture of the state of Italy's roads.



A large crowd assembles at Rome's Olympic stadium for a Madonna concert

Paolo Cellini, the head of Seat's internet division, says using data from mobile-phone networks instead would dramatically improve the service. He estimates that within two years Seat will sell subscriptions to onboard navigation systems updated in real time with information on traffic levels and average speeds. After that, Seat will provide traffic forecasts produced by correlating past traffic patterns with variables including weather, the date and nearby events, says Mr Cellini. He expects to pay telecoms operators more than €30m ($40m) a year for access to their location data.

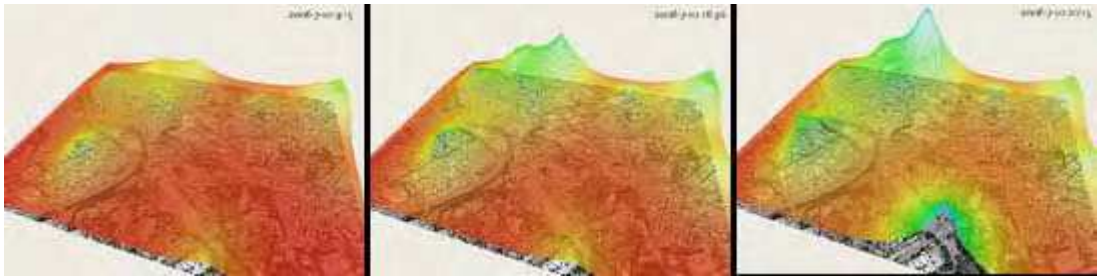
City-planning departments offer another important market, says Ricky Burdett, architecture adviser to the Mayor of London and the director of last year's Venice Architecture Biennale, at which MIT displayed a prototype real-time map of Rome (see picture). London is preparing for a projected additional 1m inhabitants in the next 15 years, and people-movement maps “will be invaluable” in planning housing and transport. Politicians will take to the technology because it can provide solid statistical backing for politically unpopular planning decisions.

Follow the people

It is not hard to think of other uses for the technology. Estate agents, for example, might be better able to appraise commercial property by determining how many pedestrians pass a given storefront. Advertisers would appreciate knowing how many eyeballs pass a hoarding and how those numbers vary between weekdays and weekends. And tourism authorities might change their promotional campaigns abroad after noting which nationalities (identified by their home networks) spend most time in town and which prefer to lie on the beach.

Rome will probably be the first city with commercially available people-movement maps. When MIT presented its project, called Real Time Rome, to Telecom Italia last year, the top management at the Italian telecoms giant gave the scheme its backing. So did Rome's mayor, Walter Veltroni, and the city's transport authority, ATAC. Fulvio Vento, the director of ATAC, says the new system will allow him to scrap an expensive annual OD survey of 2,000 people, which costs more than €60 per respondent to carry out. Mr Vento says the maps will give his planners extraordinary and unprecedented power to shuffle the schedules of Rome's 2,100 buses as demand shifts throughout the day. It could also lead to improvements in traffic-light placement, signage and road layout. Roma Metropolitane, the city authority for Rome's expanding subway network, also says the maps will be a boon to planners.

“People-movement maps could lead to improvements in transport planning, traffic-light placement, signage and road layout.”



Fans celebrate as Italy's victorious World Cup team arrives in Rome on July 10th, 2006. The areas with the highest population density are shown in green

Samarcanda, a taxi firm based in Rome, is providing free consulting services to the project in return for access to the data. The company's boss, Giovanni Coco, says his drivers still choose their routes based on habit and experience. “It's a disaster,” he says, “we need help.” Transport planning will provide a ready market, in short, but plenty of other potential uses for the technology are waiting to be discovered. People-movement maps would appear to have a colourful and pulsating future.

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Bright prospects

Mar 8th 2007
From The Economist print edition

EPA

Energy: Solar power is in the ascendant. But despite its rapid growth it will not provide a significant share of the world's electricity for decades

LAST year Microsoft outfitted its campus in Silicon Valley with a solar system from SunPower, a local company that makes high-efficiency (and, some say, the world's best-looking) solar panels. A few months later Microsoft's arch-rival, Google, began building something on an even grander scale—one of the largest corporate solar installations to date. But all of this may yet be topped by Wal-Mart. In December the retail giant solicited bids for placing solar systems on the roofs of many of its supermarkets. Besides producing favourable publicity, the appeal of using solar power is obvious. Unlike fossil fuels, which produce significant amounts of pollution and enormous amounts of greenhouse gases, the sun's energy is clean and its supply virtually limitless. In just one hour the Earth receives more energy from the sun than human beings consume during an entire year. According to America's Department of Energy, solar panels could, if placed on about 0.5% of the country's mainland landmass, provide for all of its current electricity needs.

Yet since they were first invented more than five decades ago, photovoltaic solar cells—devices made of semiconductor materials that convert light into electricity—have generated much publicity but little energy. In 2006 photovoltaic systems produced 0.04% of the world's electricity, according to the International Energy Agency. The thing that has held back the widespread deployment of solar panels is their price. Sunshine is free, but converting it into electricity is not. At present, solar power is at least two to three times as expensive as the typical electricity generated in America for retail customers. (Because homeowners and businesses generally use solar power in place of electricity bought from utilities, the relevant comparison is with the price of retail electricity, not the lower wholesale prices from power plants.)

Even so, many people believe the prospects for solar energy have never looked brighter. Decades of research have improved the efficiency of silicon-based solar cells from 6% to an average of 15% today, whereas improvements in manufacturing have reduced the price of modules from about $200 per watt in the 1950s to $2.70 in 2004. Within three to eight years, many in the industry expect the price of solar power to be cost-competitive with electricity from the grid.

In the meantime, some European countries and parts of America have instituted subsidies to support the adoption of solar power. California's “Million Solar Roofs” initiative, for example, will hand out about $3 billion in rebates and other incentives over a decade to encourage the installation of solar panels. In Europe Germany offers producers of solar power generous feed-in tariffs, which have made it the largest market for photovoltaics in the world. As a result of such incentives, the market for solar power has grown by about 40% a year for the past five years, reaching about $11 billion in 2005. In a matter of a few years, solar power has become a big business.

This development has not gone unnoticed by America's venture capitalists, who have embarked on a spending spree. Cleantech Venture Network, an umbrella organisation based in Ann Arbor, Michigan, says VCs invested $2.9 billion in North American clean-technology start-ups in 2006—78% more than in 2005 and 140% up from 2004. Solar power is one of the fastest-growing areas: investments have risen from $59m in 2004 to $308m in 2006, says Nicholas Parker, chairman of the group.

The main beneficiaries of this windfall are start-ups, such as Nanosolar and Miasolé, which are based in Silicon Valley and focus on new technologies. Both firms are betting on “thin film” solar cells, which can be made with vastly less semiconductor material than traditional silicon-based devices. They also intend to employ new, continuous manufacturing processes that promise to reduce the cost of solar panels very quickly in future.

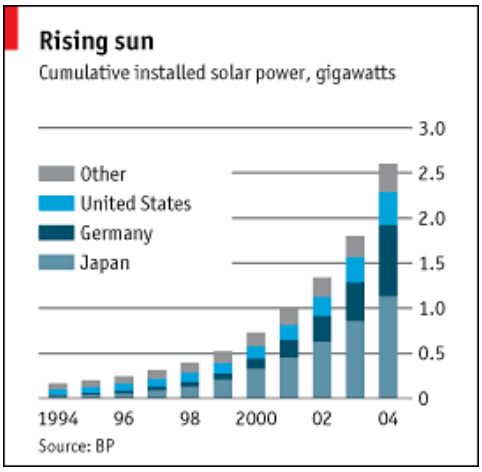
Dawn of a new technology

Humans have always depended on energy from the sun, though it was exploited mostly indirectly for thousands of years. The photoelectric effect was not discovered until 1839, when Alexandre Becquerel, a French physicist, observed that light could generate an electric current between two metal electrodes immersed in a conductive liquid. About 40 years later Charles Fritts, an American inventor, built the first solar cell. Made with selenium and a thin layer of gold,

the device was less than 1% efficient.

At the birthplace of the transistor, the now legendary Bell Laboratories, a team of scientists invented the first practical solar cell in 1954. The core of the invention was a semiconductor device made of thin strips of crystalline silicon that boasted a conversion efficiency of 6%. During one of the first public demonstrations of the “Bell Solar Battery” the device powered a small radio transmitter, carrying both speech and music.

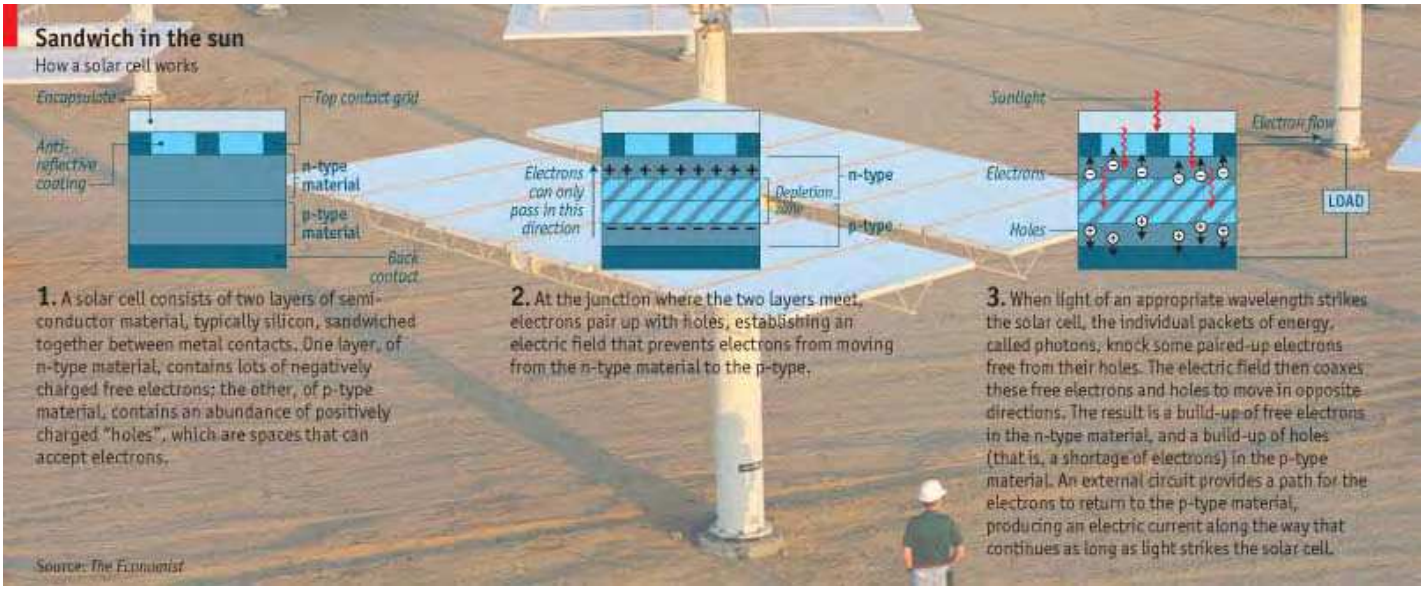
Since then, the basic structure of a solar cell has changed little. It is composed of two layers of semiconductor material, typically silicon, that are sandwiched together between metal contacts. One layer, of n-type material, contains lots of negatively charged free electrons; the other, of p-type material, contains an abundance of positively charged “holes”, which are spaces that can accept electrons. At the junction where the two layers meet, electrons pair up with holes, establishing an electric field that prevents electrons from moving from the n-type material to the p-type. When light of an appropriate wavelength strikes the solar cell, the individual packets of energy, called photons, knock some paired-up electrons free from their holes. The electric field then coaxes these free electrons and holes to move in opposite directions. The result is a build-up of free electrons in the n-type material, and a build-up of holes (that is, a shortage of electrons) in the p-type material. An external circuit provides a path for the electrons to return to the p-type material, producing an electric current along the way that continues as long as light strikes the solar cell.



The development of the first efficient photovoltaic cells at Bell Labs made headlines. The *New York Times* hailed the invention as “the beginning of a new era” and *US News & World Report* suggested that solar cells “may provide more power than all the world's coal, oil and uranium.” But although the “solar battery” received lots of publicity, the high cost—about $200 per watt—made commercialisation unfeasible.

Fortunately, a few years later both America and the Soviet Union became interested in using solar power in space, where its advantages became apparent very quickly. In 1957 the Soviet Union launched *Sputnik I*, the first artificial satellite. But it stopped transmitting data after only a few weeks because its batteries ran out. In 1958 America fired the first solar-powered satellite into orbit. The batteries of *Vanguard I* also ran out after several weeks, but its solar panels powered the on-board transmitter for years to come.

AFP

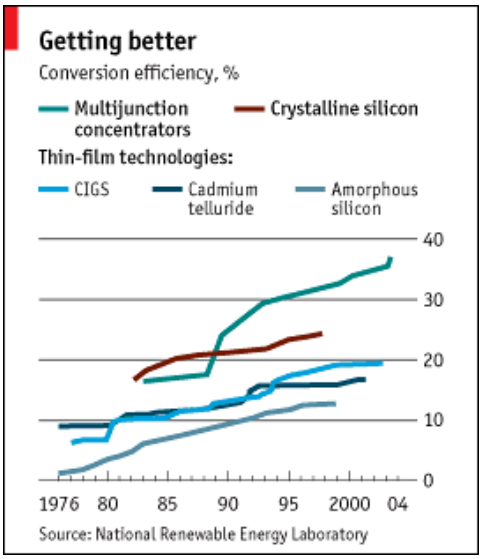


The ensuing competition between America and the Soviet Union funnelled billions of dollars into the development of space technologies, and that included solar cells. Besides efficiency, durability and reliability, the most important requirement for solar cells was how much power they could generate per unit of weight. Cost considerations, at that time, were far less important. Solar cells back then were made much like jewellery, recalls Bill Yerkes, an industry veteran who is now the chief technologist at Solaicx, a start-up dedicated to reducing the price of silicon wafers for the solar industry.

The man who helped bring solar power down to earth was Elliot Berman. He realised that for photovoltaics to succeed in terrestrial applications, reducing their cost was vital. At his company, Solar Power Corporation, he pioneered a number of manufacturing changes. Among other things, he decided to buy cheap silicon wafers that had been cast aside by the semiconductor industry. The wafers he bought were also larger in size, which made it possible to increase the diameter of the individual cells, which in turn reduced the number of cells needed to make a module. As a result he was able to produce far less expensive solar panels, reducing the selling price from $100 per watt in 1970 to $20 per watt in 1973.

The first terrestrial solar cells were used for off-grid applications in remote locations where placing conventional power lines was not possible or economical. Among the earliest buyers of solar panels were gas and oil companies, which began to use solar power in the mid-1970s to protect wellheads and underground pipelines from corrosion and to power navigational aids on offshore oil rigs. In the 1980s America's Coast Guard began using solar panels to supply electricity to buoys. By the early 1990s solar cells powered hundreds of diverse off-grid applications including telecoms equipment, emergency roadside phone boxes, and consumer devices such as calculators and watches.

Although solar cells had now penetrated numerous niche markets, the cost of making them still priced them out of the market for grid-connected electricity. That changed in 1994, when Japan began a subsidy programme. By the time the subsidies were phased out in 2005, the programme had achieved its goal. In Japan, where electricity is expensive, solar power is now fully cost-competitive with power from the grid, says Paul Maycock of PV Energy Systems, a consultancy based in Virginia.



Over the years the solar industry has been able continuously to reduce the cost of silicon-based solar panels. For every doubling in cumulative production volume, the cost of modules has declined by about 20%. That translates to an annual reduction in manufacturing costs of about 5%. A variety of factors has contributed to this, including making the wafers thinner, increasing the efficiency of the cells, and taking advantage of economies of scale by building bigger and more automated factories.

Fifty-three years after their invention, silicon-based solar cells still make up more than 90% of the market. In 2008 the solar industry is even expected to surpass chipmaking in its appetite for silicon feedstock. The extent of the demand has caused a global silicon shortage, limiting sales growth for the solar industry to less than 20% in 2006, says Jesse Pichel, an analyst at Piper Jaffray. As prices for silicon have gone up, so have prices of solar modules. After decades of steady decline, prices increased from a low of $2.70 per watt in 2004 to about $4 per watt in the spring of 2006.

That has increased the opportunity for “thin film” solar cells, which use little or no silicon. Because thin-film cells are very efficient at absorbing photons, they require less than 1% of the semiconductor material needed by their conventional counterparts. At the moment, about 40% of the cost of a conventional module goes on silicon. “If you're making a thin-film module, much of that cost will go away,” says John Benner, a group manager at the National Centre for Photovoltaics, a division of America's National Renewable Energy Laboratory. Thin-film technology also offers the potential for faster manufacturing processes and higher levels of automation, which cut costs.

For those reasons, people have wanted to move towards thin-film cells for a long time. But cadmium sulphide, an early thin-film technology that was pursued in the 1960s and 1970s in many research laboratories, did not live up to expectations. In the 1980s most scientists finally abandoned the material, since they were unable to make it stable. Even in newer thin-film technologies, high-volume production has been difficult.

Cells based on amorphous silicon, for example, have been in development for several decades. Unlike the silicon in conventional solar cells, which is arranged using expensive manufacturing processes into a uniform crystalline structure, amorphous silicon is highly disordered and can therefore be made more cheaply. But its efficiency tends to degrade when exposed to sunlight. That problem, however, has now been largely eliminated, says Terence Parker of United Solar Ovonic, one of the firms making amorphous-silicon cells. Its triple-junction solar cells, which can absorb light of different wavelengths, are so popular that the firm has become one of the largest thin-film manufacturers in the world.

Another promising thin-film outfit is First Solar, based in Arizona. Besides completing a successful stockmarket flotation last November, in which it raised $400m, it is the first company to produce large quantities of cadmium telluride-based solar panels. Although the efficiency of the modules is only 9%—far less than the 13% of an average crystalline-silicon module—the manufacturing cost is also much lower, and works out at about $1.40 per watt. That is about a dollar cheaper than conventional silicon-based modules, and has led to strong demand for the company's panels.

But the lower efficiency of thin films means they need more space: more efficient cells can squeeze more electricity out of a given area. “There is an additional cost at the systems level if the module efficiency is lower,” acknowledges First Solar's boss, Michael Ahearn. His company focuses on ground-based and large commercial systems, which are cheaper and easier to install than residential roof-based systems.

A competing thin-film technology is CIGS, which is short for copper indium gallium diselenide. The current efficiency record for this technology is 19.5%, which is why many start-ups, such as Nanosolar and Miasolé, are pursuing it. CIGS promises to combine low cost with efficiencies comparable to silicon, says Mr Benner.

But producing CIGS-based solar modules is not easy. They are composed of four different materials, which must be uniformly deposited on a backing material, or substrate. This is relatively easy when covering a small area, but it is difficult to maintain the uniformity, and thus the efficiency, of the cells over large areas. Nanosolar, which has raised $100m—more funding than any other solar start-up—believes it has found a cheap and effective solution to the problem. It mixes small precursor particles of the different materials to create a “nanoparticle ink” that is continuously coated onto metal foil and then heated so that the particles assemble correctly.

Miasolé, which is backed by Kleiner Perkins, a big Silicon Valley venture-capital firm, is also developing CIGS-based solar cells. Its approach is to deposit the CIGS layer using a sputtering process borrowed from the disk-storage industry. David Pearce, Miasolé's boss, says the firm is also developing flexible encapsulants for its solar cells, which will make it easier to integrate them into roofing materials and produce custom modules of arbitrary sizes. “It could literally be like roll-out carpet,” he says.

Others are taking yet another approach. By using lenses and mirrors to concentrate sunlight onto high-efficiency solar cells, start-ups such as SolFocus, in Palo Alto, are trying to reduce the cost per watt of solar systems. SolFocus's cell technology comes from Spectrolab, a subsidiary of Boeing, which is one of the largest suppliers of solar panels for use in space. David Lillington, Spectrolab's president, says its triple-junction cells have achieved record-breaking efficiencies of over 40% under concentrated sunlight.

These approaches may be very different, but they are all pursuing the same goal—cost-competitiveness with power from the grid. America's Department of Energy aims to get there by 2015. To many in the field this is a conservative target, especially for thin films. With additional gains in cell efficiency and by optimising its manufacturing processes, First Solar hopes to get there in 2010. Nanosolar's boss, Martin Roscheisen, boasts that his company will reach grid parity this year, as soon as its panels hit the market.

Not everyone is convinced. “The introduction of any new technology is going to have all sorts of speed bumps,” says Mr Benner. The bright prospects for thin-film companies could dim in 2008, when more silicon will reach the market and the much-lamented shortage is expected to end. Some experts even foresee a glut of silicon on the horizon, so that prices for modules could fall considerably. Start-ups will have to ramp up production quickly to compete with cheaper silicon modules. “There will definitely be some shakeout, both in terms of companies and technologies,” says Joel Makower, principal of Clean Edge, a research and consulting firm based in San Francisco.

Slow sunrise

The solar industry has in the past profited from the manufacturing improvements of chipmakers, and is now finding ways to benefit from innovations in other high-tech fields. “I think of the silicon solar-cell industry as a marriage between the semiconductor industry, where it gets its base technology, and the CD industry, which is very high volume,” says Richard Swanson, SunPower's president and technology chief. Applied Materials, a leading maker of chipmaking gear, recently decided to apply its expertise in making flat-panel displays to thin-film solar panels.

But despite the growing infusion of capital, innovation and talent, solar power will provide only a tiny fraction of the world's electricity needs for the foreseeable future. Even if the industry continues to grow at the same torrid pace that it has for the past few years, it will not be able to supply more than 1% or so of the world's electricity needs for at least another decade. That may sound like a gloomy forecast, but some regard it as a huge opportunity. It means there is a lot of room for growth, says Mr Roscheisen, Nanosolar's irreverent boss. His company generated an enormous amount of buzz last year when it announced plans to build the world's largest solar factory, in California. But, says Mr Roscheisen, “a couple of years from now this factory is not going to look that big.”

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How touching

Mar 8th 2007
From The Economist print edition

Sashimi

Computing: “Haptic” technology is gradually bringing the neglected sense of touch into the digital realm

THE smooth, touch-screen display on Apple's snazzy new iPhone, unveiled in January and due to go on sale in June, has gadget fans salivating. In place of the usual keypad, the iPhone uses the screen as an input device, displaying different buttons and icons depending on the task at hand. Rival devices from other handset-makers, including LG and Samsung of South Korea, take a similar approach. Replacing physical buttons with virtual ones certainly makes for greater flexibility—but might it make the phone trickier to use? You can tell when you've pressed a real button because you can feel the subtle “click”. But typing on the iPhone, in contrast, is said to be rather fiddly, because there is no such tactile feedback with a touch screen.

That is why Samsung's touch-screen phone, despite being less well known than Apple's device, is worth watching. The SCH-W559 handset, which is so far available only in China, fools the user's sense of touch and mimics the feeling of pressing a mechanical button, even though the surface is actually completely flat. It is the latest example of a new breed of “haptic” technologies that do for the sense of touch what lifelike colour displays and hi-fi sound do for eyes and ears.

Haptics is the science of simulating pressure, texture, vibration and other sensations related to touch. The term is derived from a Greek word meaning “able to lay hold of”. Devices that exploit haptics have been around for decades: many modern aeroplanes, for example, have haptic control columns that shake or vibrate to warn the pilot of an approaching stall. The technology has also found its way into video-game consoles, where it adds an extra layer of realism. Players can feel when they are veering off course in a driving game, or when they have been hit in a shooting game. Force-feedback technology, another offshoot of haptics, is used in robotic telesurgery and in surgical simulators to enable surgeons to feel resistance as they move their surgical instruments around, just as they would in conventional surgery.

Even the “vibrate” mode on a mobile phone, which discreetly alerts the user to an incoming call or text message, is an example of haptics. But today's technology fails to take full advantage of the sense of touch. It has particular potential in relaying information to people when their other senses are occupied, as when walking or driving, says Karon MacLean, a researcher at the University of British Columbia in Vancouver, Canada.

Vic Viegas, the boss of Immersion, a company based in San Jose, California, agrees. His firm owns important patents in the field of haptics, and the touch-screen feedback in Samsung's new phone relies on the latest incarnation of Immersion's VibeTonz technology. In previous handsets, the technology was used to provide force-feedback effects when playing games and to provide “vibrotactile feedback” when playing music. “It feels like a sub-woofer,” says Mr Viegas.

Feel the force

The new phone goes much further, using very precise actuations of its built-in motors to produce realistic, button-like clicks whenever an onscreen button is pressed. “Using a touch-screen, you normally lose the tactile confirmation you get from pressing a button,” says Mr Viegas. But with haptic feedback, on-screen buttons can be made to feel real and are easier to use. “You get the feeling that you have somehow really touched this object on the screen,” says Tapani Ryhänen, head of strategic research at Nokia, the world's biggest handset-maker, who has been investigating the idea of adding haptics to Nokia's phones as well.

Most of today's haptic devices rely on motors that either prod or vibrate the skin, but a new technology is emerging that is an even more flexible and effective means of stimulating the sense of touch: skin stretch. By laterally stretching the surface of the skin (without pushing or poking into it) it is possible to mimic the feeling of complex shapes and sensations. This is because the sense of touch seems to depend far more on the way in which the skin is deformed and stretched than it does on the degree of pressure applied. So it should be possible to recreate sensations purely by stretching skin, says Vincent Hayward, a researcher who first developed such a device at the Centre for Intelligent Machines at McGill University in Montreal, Canada.

“It's analogous to watching a TV screen,” he says. The human eye can be tricked into seeing a range of colours on a video display, even though it really only consists of tiny red, green and blue dots. In much the same way the sense of touch can be fooled into feeling shapes and textures that are not there, says Dr Hayward. In one dramatic example Mexican and Italian researchers showed that a flat surface could be made to feel sharp. The effect was so realistic that subjects were able to match different configurations of simulated sharp edges to corresponding images, says Gabriel Robles-De-La-Torre, a neuroscientist and computer engineer based in Mexico City who carried out the experiment and is the founder of the International Society for Haptics.

“The ultimate aim of haptics research is to find ways to simulate the feeling of any shape, sensation or texture.”

What a feeling

When someone moves a finger over a sharp surface, typically both vertical and lateral forces are applied to the skin, says Dr Robles-De-La-Torre. Using a haptic interface called GRAB, which was developed by Carlo Alberto Avizzano and his colleagues at the Scuola Superiore Sant'Anna in Pisa, Italy, the researchers showed that a realistic sensation can be created using skin-stretch alone, and leaving out the vertical forces. The device consists of a thimble on a motorised arm. Using the motors to apply short bursts of very precise resistance it applies slight lateral stretches to the skin of a fingertip passing over the thimble, giving the impression of a sharp edge.

The ultimate aim of this sort of research would be to find ways to simulate any kind of shape, sensation or texture, says Dr Robles-De-La-Torre. “The holy grail for me is to do fur,” says Dr MacLean. There is a long way to go, but it should eventually be feasible, she says. One of the difficulties of simulating textures, says Dr Hayward, is that the sensation of texture depends on the interaction between the surface and tiny ridges in the skin at the fingertips. In theory, it should be possible to stimulate these ridges individually using micro-electromechanical systems (MEMS) technology, but so far nobody has tried, says Dr MacLean.

Sashimi

For his part, Dr Hayward has been experimenting with other uses for skin stretch, and has developed a new type of haptic switch for use in mobile devices. The THMB (pronounced “thumb”) takes the form of a sliding button on the side of a handheld computer or mobile phone, like those used to adjust the volume or scroll through a list of contacts. But the THMB can also communicate information back to the user, since its surface consists of an array of 64 tiny rods, each of which can be moved in relation to its neighbours. When a thumb is placed on the device, the rods are computer controlled to move and stretch the skin just enough to fool the nervous system into feeling various sensations.

Dr Hayward's idea is that such switches could be used to convey information to the user without the need to look at the device. Skin stretch could be used to present the tactile equivalent of icons to the user, rather like a simple form of Braille. So far Dr Hayward has shown that people can indeed learn to recognise symbols through touch, though it is unclear how many symbols they can accurately distinguish between. Nokia has been following the research closely, says Dr Ryhänen. It might, for example, someday be possible to tell who is calling your phone just by reaching into your pocket or bag and touching it, he says.

Exactly what haptic devices will be used for is still unclear, but they seem destined to become more widespread in future. In the short term, one trend in particular will drive adoption, Mr Viegas predicts. “The world is rapidly moving towards having touch screens in most devices,” he says. The launch of the iPhone will accelerate this trend, since it is bound to spawn many imitations. “It's going to have a huge impact,” says Mr Viegas. Strategy Analytics, a consultancy, predicts that 40% of new mobile phones could have touch screens by 2012—though if haptics takes hold, perhaps “touchy-feely” screens would be a better description.

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What's in a name?

Mar 8th 2007
From The Economist print edition

Johnny Hannah

Computing: Intelligence agencies are using new software to handle the arcane business of comparing lists of names

IN 1990 a Pakistani named Mir Aimal Kansi used an alternative transliteration of his Urdu family name, Kasi, to obtain a visa at the American consulate in Karachi. He entered America, overstayed his one-month visa and then went to the Pakistani embassy in Washington, DC, and obtained a new Pakistani passport, this time with the “n” reinserted in his surname. Using this new identity, he obtained working papers and a driving licence, bought a gun and went on to shoot five CIA employees, killing two, outside the agency's headquarters. (Kansi spent four years on the Federal Bureau of Investigation's Ten Most Wanted list before being captured, and was executed in 2002.)

This case shows how the apparently humdrum process of transliterating names from one language to another can be exploited by criminals. According to the FBI, Kansi also used the names Mir Aimal Kanci, Mir Aman Qazi, Amial Khan and Mohammed Alam Kasi. That last name introduces a further twist: there are more than 15 accepted ways to transliterate “Mohammed” from Arabic into English, and when you count the ways the name is written in the other 160-plus languages that use the Roman alphabet, the figure jumps to more than 200 correct spellings. Transposing words or names from one language or alphabet into another is evidently an inexact science.

In Indonesia, where single names are common, what appears to be just part of a name may in fact be the whole name. Chinese and Korean surnames are often mistakenly written last by Westerners, but some Chinese and Koreans are now adopting the Western convention. And then there is the problem of spelling variants. The Chinese family name Zhou, for example, may be written by English speakers as Jhou, Joe, Chou or Chow. Jafari, the common English transliteration of an Iranian family name, is rendered in German as Djafari or Dschafari. Shahram, the standard English spelling of an Iranian first name, becomes Scharam in German (and Chahram in French).

Such ambiguities cause huge problems for intelligence analysts trying to monitor and prevent terrorist activity. In an effort to avoid being picked out by computer watch-lists, many terrorists use alternative (but linguistically legitimate) transliterations of their names. “It's extremely commonplace, particularly with Islamic names,” says Dennis Lormel, former director of the FBI's Terrorist Financing Operations Section, who is now an intelligence consultant at Corporate Risk International, near Washington, DC. “There are just so many variations of a name and they know that, so they can just flip-flop their name around,” he says.

But companies in a fast-growing corner of the software industry have developed name-matching programs that can take into account the thousands of possible transliterations of a particular name—say, Mohammed bin Abdul Aziz bin Abdul Rahman Al-Khalifa—as they scan through watch-lists and databases looking for a match. The industry was flooded with investment in 2004 when the 9/11 Commission noted that the terrorists who attacked New York and Washington, DC, on September 11th 2001 defeated

watch-lists by using different transliterations of their names. The commission urged the government “to close the long-standing holes in our border security that are caused by the US government's ineffective name-handling software.” In-Q-Tel, the investment arm of the Central Intelligence Agency (CIA), began pouring money into name-matching software developers, according to a former official who chose which firms to finance. He says the technology is now becoming “pretty solid, robust stuff”.

A name by any other name

“One of our biggest problems has always been variations of names,” says Michael Scheuer, who was the head of the CIA's Osama bin Laden Unit from 1996 to 1999. Mr Scheuer says analysis was “backbreaking”, especially for Arabic names, because it involved manually compiling lists of variations deemed worthy of tracing. This included positing names with or without titles such as bin (“son of”, also written as ben or ibn), abu (“father of”, also written as abou), sheikh (tribal leader, also written as sheik, shaikh, shaykh, cheik and cheikh) or haji (Mecca pilgrim, also written as hajj, hajji, hadj, haaji, haajj, haajji and haadj). The article al (also written as el) may be attached to surnames directly, separated from surnames with a hyphen or a space, or omitted altogether. Some variants do not even look similar. Sheikh can be written as jeque in Spanish. Wled, one English transliteration of an Arabic first (and last) name, is often written as Ould in French.

To make matters worse, many bureaucracies tolerate name abbreviations and short forms. The result is that intelligence analysts, no matter how expert, are often plagued by doubts. Has a Russian-speaking intelligence officer in Moscow transliterated into Cyrillic the name of a Nepalese suspect in exactly the same way as a Russian-speaking Uzbek field officer? Has an Italian analyst working with Russian intelligence caught and corrected the error, or passed it along?

“Name-matching can play a crucial role in counterterrorism by enabling analysts to piece together snippets of intelligence.”

Name-matching difficulties actually worsened when counterterrorism activity increased in late 2001. Analysts were granted greater access to databases kept by foreign agencies—but locating relevant files proved hard. A Portuguese case officer, for example, might have difficulty taking advantage of Dutch intelligence on, say, Nepalese Maoist extremists, if he is unfamiliar with Dutch conventions for the transliterations of Nepalese names. The number of people gathering and handling intelligence also increased suddenly, and many newcomers had little language training or were unsure how to transliterate names from spoken sources. Information on suspects increased, but spelling variations—due both to terrorist subterfuge and intelligence shortcomings—made it harder to interpret.

Mr Scheuer says that by late 2004, when he left the CIA, name-matching software was beginning to perform well, and American agencies were investing heavily in the latest technology—with one glaring exception. Computer systems at the State Department, according to Mr Scheuer, were “archaic compared to the rest of the intelligence community”. That was a grave weakness, considering that the State Department issues passports and visas for travel to the United States.

Johnny Hannah

If someone fears that the Romanised version of his name has been flagged, he can choose a new (but linguistically correct) transliteration, and then establish that spelling gradually by using it on low-level documents such as a gym membership card or a lease agreement. These “feeder documents” are used to obtain progressively higher-level identity documents, such as a city-issued residence card, a driving licence or a certified birth-certificate translation. These documents, in turn, are presented at consulates to obtain the ultimate prize—passports and visas using the new variation of the name.

“It's a very tough set of problems,” says Philip Zelikow, executive director of the now-dissolved 9/11 Commission. The group's research turned up numerous cases of transliteration fraud. Mr Zelikow notes, however, that the American government is now doing a better job handling names. Other experts affirm that the State Department has dramatically upgraded its name-matching software.

There are no firm estimates of how much name-matching software is being sold worldwide. Government agencies generally decline to release figures, and software firms shy from discussing hard numbers. Those in the industry, however, claim that growth is spectacular. Sam Kharoba of First Capital Technologies, based in Baton Rouge, Louisiana, says his firm's sales have doubled in each of the past

three years. Its clients include America's Defence Department and over 20 other government agencies. Around 25 companies are working in the field in America, and a handful are in Europe.

As watch-lists multiply beyond the realms of intelligence and international travel, demand for such software is likely to grow. Increasingly, watch-lists are used to restrict access to training and education, and to stop people buying property, guns, chemicals and other things that can be made into weapons. Many postal services rely on name-matching software to pick out packages for inspection.

The financial services industry is also adopting the technology, which is often required by central banks and monetary authorities. In America, the Treasury's Office of Foreign Assets Control is one of the world's largest users of name-matching technology. It uses it to compile watch-lists that are sent to thousands of banks worldwide. Credit-card companies use the software to spot recidivists applying for new cards under modified names. (Names are cross-referenced with addresses, dates of birth and other data.) Developers and users are hesitant to discuss costs. But OMS Services, a British software firm, says government agencies pay a lot more than commercial users, who pay about $50,000 for its NameX programme.

Name-matching software is also becoming more sophisticated and performing other functions. The name-matching software made by Identity Systems, based in Old Greenwich, Connecticut, is used by more than 200 government agencies around the world. As well as flagging names on watch-lists, it also sifts historical records to reveal hidden relationships: if two men have entered a country several times on the same plane, sitting apart from each other, might one be a moneyrunner and the other his overseer?

Names and numbers

GNR, a software firm owned by IBM, makes software that “enriches” names by annotating them with inferred cultural information, scored according to probabilities derived from demographic data. Given a particular name it can, for example, say how likely someone is to have a particular place of birth. Names and titles can also provide clues as to birth order, occupation, deaths of spouses and immigration history. GNR also repairs names that are “damaged” by transliteration because the original non-Roman script is lost. The software generates possible original spellings and provides accuracy probabilities for each one. This helps spooks starting with the Romanised versions of, say, Pushtu names, to gather intelligence on those individuals in their native Afghanistan. GNR sells its software to law-enforcement and intelligence agencies—those in Australia, Israel and Singapore are particularly big spenders.

Name-matching software is just one small item in the counterterrorism toolbox. But it can play a crucial role by enabling analysts to piece together snippets of intelligence. What's in a name? The answer, in some cases, is a surprising amount of valuable information.

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Watching the web grow up

Mar 8th 2007
From The Economist print edition

Tim Berners-Lee created the web in 1991. Now people are talking about Web 2.0—but he is more excited by other things

Andy Potts

IN 1994, when Tim Berners-Lee left CERN, the particle physics laboratory near Geneva where he created the world wide web, to move to the Massachusetts Institute of Technology (MIT), his children were toddlers—just like the fledgling information-sharing system he had released onto the internet three years earlier. Since then the web has grown up fast, expanding from around 10,000 websites in the world at the end of 1994 to over 100m today. After this rapid growth spurt the web is now, like Sir Tim's children, in its teenage years. The painfully self-conscious “Web 2.0” movement—a label which encompasses a range of technologies such as blogs, wikis and podcasts—represents the web's adolescence. It has all the hallmarks of youthful rebellion against the conventional social order, and is making many traditional media companies tremble.

Sir Tim ought to be thrilled. After all, his original vision was for the web to be a two-way medium, in which writing information was just as simple as reading it—but as the web took off in the late 1990s, publishing tools failed to keep up with web browsers in ease of use, and it is only with the rise of blogs and wikis that the balance has been redressed. Yet Sir Tim is less excited by all this than you might expect. He regards Web 2.0 as just a fancy name for some useful, if still rather basic, web-publishing tools, and was not at all surprised by the emergence of “user-generated content”—since that was what he had intended all along. “The web was designed so every user could be a contributor,” he says. “That sort of participation was the whole idea and was there from the start.”

Although he is somewhat sceptical of the hype around Web 2.0, Sir Tim is excited by three other areas of the web's development: its spread to millions of new users via mobile devices, the growing interest in the technology's social and political impact and the “semantic” web, in which information is labelled so that it makes sense to machines as well as people. “If you look at the number of internet-capable mobile phones, PDAs and so on, they are rapidly outnumbering the things we think of as computers,” he says. “As the price of these devices falls, large parts of the developing world will get web access. When you have a large mass of new users, you will get many new applications, written by people with other needs.”

The number of internet users reached 1 billion in 2005. But although about 70% of the population now has access to the internet in North America, the figure is just 11% in Asia and less than 4% in Africa. To the jaundiced observer who remembers the disappointment of WAP, the first attempt to bring the internet to mobile phones, Sir Tim's enthusiasm for mobile-internet access may sound like déjà vu. But he insists that there are crucial differences. “WAP was not based on standard internet protocols, there was no competition for browsers, and operators had a stranglehold on access,” he says.

Going mobile

All of this stifled innovation. The trick now is to bring the web, rather than some limited, cut-down version of it, to mobile devices. “The point of the web is that it is open, and anyone can create a new

resource, instantly get feedback, and rapidly have a money stream flowing," he says. Under Sir Tim's leadership, the W3C—the web-standards body at MIT that he has headed since 1994—has launched a mobile-web initiative to adapt web standards so that information can be more easily accessed via mobile devices. Such standards will, he hopes, help to make the riches of the web available to the next billion users.

That should help to extend the benefits of the web to more of the world's population. But it will also help to spread what critics regard as the web's negative aspects. "Clearly, any technology can be used for good or for bad. That's always been the case," says Sir Tim. "But in general, more communication is a good thing." It can, he notes, build bridges between cultures, boost commerce and accelerate scientific progress. The web can be used by criminals and racists—but it can also be used to counter them. Totalitarian regimes can filter content on the web and use it to track dissidents, but human ingenuity means that attempts to block the flow of information altogether are doomed to fail.

Sir Tim is credited with creating the web's technical underpinnings—such as HTML and HTTP, the protocols used to encode web pages and transmit them across the internet—but he has always argued, with characteristic humility, that the web is as much a social creation as a technical one. In fact, its social and technical aspects are intertwined, and understanding how the networks of people and computers that make up the web interact and reinforce each other has given rise to "web science", a nascent field that blends sociology with computer science.

To encourage this line of enquiry, Sir Tim last year helped to establish the Web Science Research Initiative (WSRI), a collaboration between MIT and the University of Southampton. "Web science looks at the web as a large system which depends on the laws of behaviour between people, like copyright law, as well as the protocols that govern how computers communicate with each other," he says. Such laws and protocols are drawn up in the hope of producing a large-scale effect, such as creating the blogosphere or facilitating scientific publishing. The point of web science is "to understand how these large-scale effects depend on the underlying laws and protocols".

An analogy can be drawn with the way that a few simple chemical interactions between atoms define how they bond together to form molecules, and that in turn specifies how proteins interact and DNA can copy itself, all of which ultimately determines the properties of immensely complex systems such as the human brain. Understanding how such "emergent phenomena" can result from simple laws has been all the rage in physics circles for over a decade, though in the web's case the basic rules are man-made, rather than being laws of nature.

Why bother studying any of this? Sir Tim is optimistic that analysis of the web will be followed by synthesis of this understanding into technical proposals that can encourage and support new social trends. Ultimately, he hopes the WSRI will produce recommendations for improvements to the web that can be fed into the technical agenda of the W3C. Understanding the interaction between technical protocols and social rules ought to make it possible to use the web more effectively in society, he thinks.

"The semantic web aims to allow computers to extract useful information from data on the net."

Analogies between the web and the brain have long played a profound role in Sir Tim's thinking. He is the son of two mathematicians who worked on the team that developed the world's first commercial, stored-program computer, the Manchester University Mark 1, which was commercialised by Ferranti, a British company, in the 1950s. He remembers his father reading books on the brain, looking for ways to make computers able to identify connections between things, as the brain does.

This line of thought has stuck with Sir Tim and is at the core of one of his most enduring passions, the semantic web. Whereas the web today provides links between documents which humans read and extract meaning from, the semantic web aims to provide computers with the means to extract useful information from data accessible on the internet, be it on web pages, in calendars or inside spreadsheets. Such data—much of it stored in databases that can be queried by humans via the web—is part of what is referred to as the "deep web", and cannot be accessed by the web-crawler programs used by most search engines.

No one knows exactly how much information is in the deep web, but estimates range from hundreds to thousands of times more than in the "surface web" that search engines currently index, which is thought to contain over 10 billion pages. If semantic-web technology can help computers access even a fraction of this hidden data, and make sense of it, it could make possible new forms of searching and would even allow software to retrieve information and make deductions from it.

A matter of semantics

The semantic web has been a work in progress for over a decade—indeed, Sir Tim has said that he has been working on it since he started work on the web. A few detractors have argued that it is simply not feasible in practice to expect people to apply labels to all the information sitting on the internet so that machines can make sense of it. But Sir Tim remains optimistic. He points to solid steps forward, including XML, a language which provides a basic syntax for sharing data and has been widely adopted. The key building block is the Resource Description Framework (RDF), which provides a way to refer to different objects (such as sets of data) and the relationships between them—the underlying semantics of documents and data. Then there is the Web Ontology Language (OWL), which provides a way to characterise objects.

“There's a thriving community working on the semantic web,” says Sir Tim. The basic standards are in place, a query language called SPARQL is about to be launched, and the first semantic-web browsers are being prototyped. These are far more complex than web browsers, says Sir Tim. “You have to be able to display the data, draw graphs and so on. This is still very much at the research stage,” he says.

When pressed for examples of applications of the semantic web that common mortals might appreciate, Sir Tim enthuses about “friend-of-a-friend” networks, where individuals in online communities provide data in the form of links between themselves and their colleagues and friends. The semantic web could help to visualise such complex networks and organise them to allow a deeper understanding of the community's structure. He also sees semantic-web technology playing a role in syndicating useful data, such as weather information, in the same way that RSS feeds are now used to syndicate news items and blog postings on the web. And just as the web was first embraced by particle physicists, the semantic web may well take root in the life sciences, where it could allow separate genomic databases to be linked, searched and compared in novel ways.

These examples may not sound like a revolution in the making. But doubters would do well to remember the web's own humble origins. In 1989 Sir Tim submitted a rather impenetrable document to his superiors at CERN, entitled “Information Management: A Proposal”, describing what would later become the web. “Vague but exciting” was the comment his boss, the late Mike Sendall, scribbled in the margin. The semantic web may seem equally vague today, but it could prove just as exciting.

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Mar 8th 2007
From The Economist print edition

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Aviation in India

The flying elephant

Mar 8th 2007 | DELHI
From The Economist print edition

The merger of India's state-owned airlines heralds an industry shakeout

Getty Images

Get article background

IT WAS on a helicopter flight from Mumbai to Goa that Captain G. R. Gopinath had a vision of lifting Indians to the skies. Far below, silver television aerials were glinting from mud huts: signs of an economic boom that India's four main airlines, at that time, had failed to capitalise on. So in 2003 Mr Gopinath launched India's first low-cost carrier, Air Deccan, and started a craze. India now has 13 passenger airlines and a dozen awaiting permission to launch. The number of domestic passengers increased by around 30% last year.

Hence the government's approval, on March 1st, of a long-standing proposal to merge four badly run state-owned carriers, in order to make them more competitive in a crowded market. The four are Air India, which mostly flies internationally, Indian (formerly Indian Airlines), which is mostly domestic, and their respective low-cost and regional subsidiaries, Air India Express and Alliance Air. Both the big firms have had to endure years of political meddling and underinvestment, and have lost out to sleeker competitors as a result. Indian, which until 1994 had a monopoly on domestic passenger services, now has a market share of 17% and falling, despite getting most government business.

Some immediate benefits are promised. The new airline, which is scheduled to emerge after four months, will have 121 aircraft and 30,000 employees, making it one of the world's 25 biggest. That should interest investors: the government means to float 10-20% of the new entity on the stockmarket to raise cash and, it dares to dream, standards too. The government is hoping for a tie-up with one of the global airline alliances, membership of which would multiply foreign passengers. Ending competition between the state-owned firms will also benefit their main shareholder. At present, three of them vie for the same passengers to Singapore.

Cleared for take-off

There is also huge potential for rationalisation of ground handling, engineering, sales offices and so on. Air India is one of only a handful of large airlines without a big domestic feeder airline. The others—Emirates, Singapore and Virgin Atlantic—have none of its potential advantages as a national carrier of a vast and thickly populated land. According to Praful Patel, the minister for civil aviation, the merger will cost $50m and will reap annualised benefits of $150m. He calls it a “no-brainer”.

He may be right. Only around 1% of India's 1.1 billion people fly, so there is a lot of room for growth. The 35m-40m domestic air tickets they are predicted to buy this year compares with 130m in China. But to realise this potential, the newly merged union of Air India and Indian will need overhauling at every level. For one thing, its competitors are fierce. India's biggest domestic carrier, Jet Airways, with 27% of the market, aims to make half of its revenues from international flights by 2009. Given its big domestic base and good service, this would make it a strong candidate for a global alliance.

To increase efficiency, newly merged companies usually cut jobs—and the state-owned airlines, which employ some 400 people per aircraft, roughly twice the international average, have jobs to burn. But to soothe the government's communist allies, Mr Patel has promised that not one job will be lost. Mr Gopinath, one of many sceptics about the merger, says it is “like tying together two legs of an elephant.”

Still, the new airline will have two big advantages. The first, after years of under-investment in state firms, is new aircraft worth $10 billion. Air India and its subsidiary will soon start receiving 68 new planes, including Boeing 777s and 787s, which will enable it for the first time to fly non-stop between India and America. Indian has 43 new aircraft on the way. Second, the merger comes at a time of rapid growth. If sustained, reckons Binit Somaia of the Centre for Asia-Pacific Aviation in Sydney, it could mop up the new airline's excess labour within three years.

If the industry's long-term health is assured, the short term is murkier—as ever in India. Under pressure from low-cost carriers, all domestic airlines have slashed prices, and most are losing money. A few years ago the average Jet Airways fare from Delhi to Mumbai was around 8,000 rupees ($180), twice today's average. Since mid-2006 passenger loads have shrunk to some 60-70% of capacity for both low-cost and full-service carriers. That is roughly 10% below profitable levels.

Increased capacity partly explains this, but not completely. Some analysts expect official figures on passenger numbers, which grew by 45% between April and October, to show more moderate growth in the second half of the financial year that ended last month. This might indicate that some of the pent-up demand for affordable air travel, from businessmen and middle-class families, has been satisfied. Even the cheapest carriers are, after all, usually dearer than India's buses and trains, which carry 25m passengers a day.

Another reason for slackening demand could be disenchantment with flying. India's aviation infrastructure is overstretched, causing annoying delays at every stage of a journey. Delhi airport's domestic terminal was built to carry 7.3m passengers a year, but handles twice that number. Aircraft flying from Mumbai to Delhi, a two-hour trip, routinely circle in the air for another hour while a landing slot is found. New airports are due to open in Bangalore and Hyderabad next year. Private investors are developing old ones in Delhi and Mumbai, but these will have little extra capacity until 2010.

Some airlines are finding novel ways to relieve these pressures. At a time of high world demand for new aircraft, Deccan has raised $100m by selling some of its options on new airliners. Others have tried new business models: Paramount, a small regional carrier based in Chennai, offers only business- or first-class service.

Nonetheless, ticket prices are simply too low for most carriers to turn a profit. At some stage they will have to rise, which will turn off more potential flyers. By that time, however, more consolidation within the industry may have further cut the number of airlines left in the air. “Everybody's bleeding, everyone's losing money,” says Vijay Mallya, the boss of Kingfisher Airlines, a high-end, full-service carrier. “The question is: Who has the staying power to escape the bloodbath?”

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Duty-free retailing

Lakes of whisky and perfume

Mar 8th 2007
From The Economist print edition

Duty-free retailers are up in arms about new airport-security rules for liquids

“THE Russians get so angry that they drink a bottle of vodka on the spot and a few irate passengers have thrown bottles of perfume at our security personnel,” says Edgar Engert, a spokesman for Munich's airport operator. To comply with European Union (EU) security rules, airport employees confiscate thousands of litres of alcohol and perfume every week from air passengers making connections in EU airports.

The rules were introduced after Britain's security services foiled a plot to blow up airliners using liquid explosives last August. Scanners cannot detect liquid explosives, so a 100ml limit was imposed on liquids, gels and pastes in hand luggage. Exemptions can be made for baby food, medicine and items bought at duty-free shops beyond the security barrier. Those travelling within the EU's 27 member states plus Norway, Iceland and Switzerland can take duty-free goods on connecting flights, provided they are in tamper-proof bags. The problem is that transit passengers arriving from elsewhere cannot.

In December the International Civil Aviation Organisation (ICAO), a global standards body, adopted the EU rules and recommended that its 189 member countries introduce them by March 1st. Japan, South Korea, Fiji, Indonesia and Taiwan complied, but many countries missed the deadline. Worse, the application of the rules varies widely. By April new rules for liquids will come into force in Australia, Hong Kong, Malaysia, Morocco, Tunisia and 30 other countries. But all of them are a bit different.

This is disastrous for the duty-free trade. According to the European Travel Retail Council (ETRC), a lobby group, sales have fallen by as much as 40% as passengers stay away, worried that goods they buy will be confiscated. The ETRC is especially upset about Australia's regulations, under which passengers will be screened on arrival and containers of liquid over 100ml confiscated. Unless the exception for tamper-proof bags is adopted globally, the duty-free trade will slowly fall apart, it warns.

Do the rules improve security? After a heated debate with members of the European Parliament (MEPs), Jacques Barrot, the EU transport commissioner, promised to investigate. “If these measures had helped to hunt down terrorists, we would have heard about it,” says Reinhard Rack, an Austrian MEP. The ETRC and MEPs are pushing Mr Barrot to negotiate bilateral agreements on rules for transit passengers. Some two dozen countries including Dubai, South Africa and Hong Kong have approached the EU for such a deal. Further complicating matters, new EU rules on hand luggage come into force on May 6th. Expect more airport altercations.

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Transatlantic aviation

The sky's the limit

Mar 8th 2007
From The Economist print edition

An “open skies” deal between America and Europe causes controversy

Alamy

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AFTER sitting in the hangar for four years, might an “open skies” deal to liberalise air travel between America and the European Union (EU) soon be cleared for take-off? In a surprise announcement on March 2nd the two sides unveiled a provisional agreement that would allow any EU or American airline to operate flights between anywhere in Europe and anywhere in America. But although American airlines are already allowed to operate routes within Europe, European airlines would not be granted a reciprocal privilege within America. Europe's transport ministers will vote on the deal on March 22nd. Its approval is far from certain.

European critics complain that the deal gives too much ground to the Americans. Previous negotiations foundered on European objections to America's limits on foreign ownership of airlines. (Foreigners may not own any more than 25% of the voting capital of an American carrier.) The Bush administration's failure to persuade Congress to lift these restrictions last year had dampened expectations of a deal.

So the European negotiators took a more pragmatic approach. They accepted that changes to ownership rules, and to “cabotage” rights that prohibit European airlines from operating on American domestic routes, were not on the table—but decided to press ahead regardless.

American negotiators have promised to revisit these two areas in further talks and insist that they have also made concessions. EU carriers will, for example, acquire limited rights to carry American government-funded passengers and cargo. Moreover, they will be able to invest in certain non-European carriers without sacrificing any American landing rights. Even so, the Europeans have moved the most.

Not for the first time, the loudest opposition to the deal has come from Britain, which has 40% of Europe's transatlantic traffic. Martin Broughton, chairman of British Airways, called the deal a “con trick”. As one of four airlines (the others are Virgin Atlantic, American Airlines and United Airlines) allowed to fly between Heathrow and American destinations, BA has most to lose from competition.

Although capacity at the world's busiest international airport is scarce, an open-skies deal could unleash a round of slot-trading between carriers who operate short-haul services from Heathrow and long-haul airlines vying for transatlantic slots. BMI holds valuable slots that it would love to use for more lucrative long-haul routes. Analysts at Deutsche Bank calculate that more than £400m ($780m) of BA revenue could be at risk.

The British government has reacted cautiously, saying that more work needs to be done. But it looks isolated. Countries that have not negotiated new bilateral deals with America, such as Ireland and Spain, are in favour. Angela Merkel, Germany's chancellor and the holder of the EU presidency, is keen to inject some vim into transatlantic relations. A signing ceremony would make an ideal centrepiece to a planned transatlantic summit due to be held in Washington, DC, on April 30th.

Liberalisers are disappointed. “We wanted a giant leap and got baby steps,” says Anthony Concil of IATA, a trade organisation. But the wait for a perfect deal would be a long one—if, indeed, perfection is attainable. Congress is not about to change its position on ownership or cabotage. “If it's all or nothing, we're stuck with nothing,” says John Byerly, who led the American negotiating team. The ownership restrictions are largely theoretical in any case: it is unlikely that European airlines would rush to buy their American counterparts, even if they could.

Failure to agree a deal would both impede consolidation among European airlines and leave the door open to regulatory scrutiny of the existing bilateral deals between EU members and America, which have been branded illegal by the European Court of Justice. The proposed deal is certainly not perfect, but an agreement that offers greater clarity, competition and choice would surely be better than no agreement at all.

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Medical tourism

Sun, sand and scalpels

Mar 8th 2007 | BANGKOK
From The Economist print edition

Soaring health-care costs in the rich world offer Asian firms an opportunity

AMERICA'S soaring health-care costs, already $2 trillion a year, are predicted to double in the coming decade. Dissatisfaction with the rocketing price of care will only get worse as demanding and health-conscious “baby-boomers” hit retirement and start to suffer the costly ailments of old age. In countries like Britain and Canada, with supposedly universal coverage, state spending is not keeping up with growing demand, so patients face long and agonising waits for operations. And in the prosperous bits of Asia and the Middle East growing numbers of people are rich enough to demand high-quality medical care that they cannot get locally.

AP

Now that's what I call room service

All this presents a fantastic business opportunity for those Asian countries, principally Thailand, Singapore and India, which have excellent private hospitals that are used to treating foreigners and where costs are a fraction of those in rich countries. “Medical tourism” is booming as patients look abroad for cheap, fast treatment, often combined with a holiday afterwards. Josef Woodman, the author of “Patients Beyond Borders”, a new guide for those seeking surgery abroad, reckons that 150,000 Americans did so last year, and predicts the numbers will double this year.

Booming demand is encouraging rapid expansion at big stockmarket-listed hospital operators such as Thailand's Bumrungrad and Bangkok Dusit, Singapore's Parkway and Pacific Healthcare and India's Apollo Hospitals. This week Pacific Healthcare said it would build seven medical centres across Asia. Bumrungrad, which treated 430,000 non-Thais last year, has just expanded its Bangkok hospital and is setting up in the Philippines and Dubai.

Singapore is more expensive than Thailand, but still far cheaper than America. Goh Jin Hian, the head of Parkway's Gleneagles Hospital, says Singapore should try to compete for the most complex treatments, leaving cosmetic surgery and other price-sensitive operations to lower-cost rivals such as Thailand. Nevertheless, like the Thai hospital operators, he is sure the medical-travel boom will provide plenty of foreign patients for them all.

Mr Woodman reckons that today's boom is just the start. So far, most medical tourists pay their own way. But the Asian hospital operators are now courting American health insurers and employers desperate to rein in soaring costs. Bumrungrad's marketing chief, Ruben Toral, who was in America this week for talks with insurers and big employers, says they were very keen. BlueCross BlueShield of South Carolina already offers Bumrungrad's cut-price treatments to members whose policies do not cover the surgery

they need.

To reassure foreign patients, many hospitals are seeking accreditation from the Joint Commission International (JCI), the international arm of the body that accredits American hospitals. Thailand's Bumrungrad and nine Singaporean hospitals already have JCI certificates. Raymond Chong, the boss of Bangkok Dusit's Samitivej Hospital, reckons it will be only a year or two before big American insurers and employers routinely offer patients lower premiums if they are prepared to travel to a foreign JCI-accredited hospital for surgery.

For patients, employers and insurers the benefits are clear. But the hospital operators are bracing themselves for a backlash from the rich countries' medical vested interests whose jobs are, in effect, being outsourced. Expect much shroud-waving from doctors' associations and health-care unions as they highlight the few cases of foreign surgery that go wrong—as though such a thing never happens back home.

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Corporate HQs

Manager, offshore thyself

Mar 8th 2007
From The Economist print edition

Does the location of a company's headquarters matter any more?

ASK fans at the cricket World Cup, which starts in the West Indies on March 11th, where Wisden Group, the sport's best-known publisher, is headquartered and most would guess London. Its heritage and brand are quintessentially English. Britain is still its biggest source of earnings. But its future lies to the east. Supporters of the Indian cricket team account for 60% of the traffic to the firm's fast-growing Cricinfo website. Advertising and sponsorship in India are exploding too. Tom Gleeson, the group's chief executive, relocated to Bangalore in August 2006. “If we are seriously saying that the future of the business is in India, then as CEO that's where I have to be,” he says. Mr Gleeson's hope is that a local successor will eventually replace him.

Wisden may be small, but it is not alone in rejigging the location of its top brass to suit the changing needs of its business. Wall Street banks have started shipping senior people from New York across the Atlantic in a nod to London's growing financial clout. Nokia, Finland's mobile-phone giant, has splintered its top ranks in the opposite direction: four members of its 11-strong senior management team, including the chief financial officer, are based in New York state. America accounts for only 7% of the firm's sales, but it is a vital market, a financial hub (over 40% of the company's investors are there) and home to lots of technology firms. As “convergence” shakes up the mobile-phone industry, Nokia wants to be close to the action.

Procurement bosses are meanwhile trickling towards Asia. In October John Paterson, IBM's chief procurement officer, moved to Shenzhen, China, the first time the head of a company-wide function at the firm has been based outside America. Asia accounts for one-third of IBM's $40 billion purchasing budget and that share is expected to grow. Mr Paterson says he had to move in order to improve IBM's purchasing talent in the region and to develop the local supply base, particularly for software and services.

Wisden, Nokia and IBM believe others will follow their lead. Parcelling jobs out to where they are done best is, after all, the essence of offshoring. It's all too easy to be distant from your market and from your people, warns Mr Gleeson. Yet virtual management does not have to mean decentralised management. Technology means you can run global operations from anywhere in the world, says Mr Paterson. The boss of Lenovo, a computer firm, lives in Singapore, for instance, but its principal operations are in China and America.

Some think the status and power of headquarters are waning as a result. One sign of this may be growing sales of commercial property. Robert Bonwell of Jones Lang LaSalle, a property consultancy, reports that occupiers offloaded real-estate assets worth more than $55 billion last year, much of it office space.

But the era of the virtual HQ is still some way off. Corporate headquarters have three main jobs: handling administrative tasks such as paying tax and raising capital; housing “parenting” roles such as strategic planning, dealmaking and talent management; and providing shared services that span businesses. Shared services have been progressively unplugged from headquarters over the past decade, but the other roles tend to be stickier.

According to Margaret Exley of Mercer Delta, a consultancy, managers like to be near each other. Left to their own virtual devices, they would tend to focus on their own fiefs. Bosses also like to be near investors. Recent research by academics in Britain and Sweden suggests that corporate headquarters are becoming more mobile: 23 firms in the *Fortune* 500 have moved their head offices from one country to another, more than half of them in the past five years—partly because they want to be near global financial centres.

In some cases heritage matters too. Wal-Mart is synonymous with Bentonville, its home town in Arkansas,

and Hershey takes its name from the town in Pennsylvania where it is based. Heineken's boss has his office in what used to be the founding family's salon. Wisden's Mr Gleeson may have moved, but he will not tamper with tradition too much: the editor of Wisden's famous yellow Almanack remains firmly entrenched in Britain.

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Mining in Canada

Out of a hole

Mar 8th 2007 | OTTAWA
From The Economist print edition

How Canada's mining industry has changed since 1997's big scandal

THERE was a time when the annual convention of the Prospectors and Developers Association of Canada drew a crowd of rough characters from Canada's northern bush intent on whooping it up in the big city and telling tall tales to financiers about their mining claims. The event in Toronto this week was not a frontiersman's gathering, however, but the world's biggest mining gabfest. A few old-timers remain, but most of the 15,000 delegates at this year's event were more adept at wielding a BlackBerry than a pickaxe, and were more likely to have come from Mongolia, Peru or South Africa than Balmertown, northern Ontario. Yet the conversation was reassuringly familiar. Will today's seam of luck (good or bad) continue? And how can the industry cope with changing times?

Canadian mining firms, like those elsewhere, have been riding high since metal prices began their stratospheric ascent in 2002. More than half of the world's mining and exploration firms, some 1,274 in total, are registered on Toronto's two exchanges, the TSX and TSX Venture. Collectively, they raised $11 billion in equity financing last year, largely on the strength of China's unabated appetite for raw materials. But recent jitters in stockmarkets and commodities markets have heightened concerns that some metal prices have peaked.

Even so, the mood in Toronto was celebratory. Before the boom, the junior mining companies that include most of the Toronto listings had suffered a long dry spell. Low mineral prices were only partly to blame for the dearth of investment to finance exploration and development. Another reason was the scandal over Bre-X Minerals, a Canadian firm that falsely claimed to have discovered a huge gold deposit in Indonesia. Stockmarket investors lost some C$6 billion ($4.4 billion) when the fraud came to light. No one was ever convicted for the largest stock swindle in Canadian history, though Bre-X's vice-president, John Felderhof, has been charged with insider trading. A verdict is expected later this year.

For a while the scandal overshadowed other Canadian firms, but the cloud has now lifted, says Jens Hansen, a prospector based in Ottawa who attended the convention. Its legacy is tighter regulation, including a requirement that the results from exploratory drilling are independently vouched for, to prevent core samples being “salted” with gold or other minerals, as happened with Bre-X.

Mr Hansen is in the fortunate position of holding claims on properties showing potential for uranium, one of this year's sought-after minerals. As concern over climate change improves the prospects for nuclear power, uranium demand has outpaced supply and speculative buying has forced the price up to $85 per pound, from $10 in 2003. Canada's prospectors have fanned out to stake claims in northern areas that were previously overlooked.

This has led to other shifts. Where once the talk was firmly on the mechanics and financing of mining claims, the convention's agenda now includes workshops on how to deal with aboriginal communities. In America such sessions have been an industry staple for at least a decade, says Hans Matthews, who advises aboriginal groups on how to treat mining firms. Much of the activity is on land that is either owned by aboriginal groups, or subject negotiations over title. All this is bringing out the miners' softer side. Corporate social responsibility was considered so esoteric two years ago that a planned session at the convention was cancelled due to lack of interest. This year's two-day session, by contrast, was sold out in advance.

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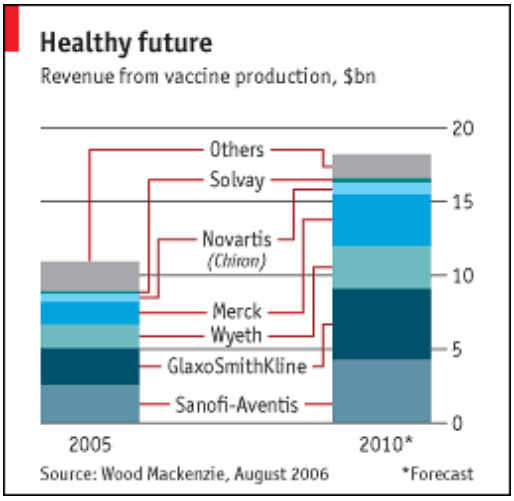
Vaccines

Beyond the egg

Mar 8th 2007 | NEW YORK
From The Economist print edition

The global vaccines industry is undergoing a renaissance



"WE WANT to get rid of this chicken-and-egg situation," says Philippe Monteyne of GlaxoSmithKline (GSK). He is not talking about an impasse involving drugs regulators or commercial rivals to the big British pharmaceuticals firm. He is talking about the things with feathers and the eggs—some 50m of them each year—that his firm still uses to make flu vaccines, just as the industry has done for decades. Unlike drugs and biotech, vaccines are decidedly low-tech.

But that is changing. This week GSK announced the results of two trials that validate its big bet on new technologies. Its new "pre-pandemic" influenza vaccine not only offers protection against a strain of the H5N1 avian flu virus, as existing vaccines do, but also prepares the human immune system to respond quickly against other related strains. The key is the use of sophisticated "adjuvants", delivery agents that can reduce the amount of precious antigen required even as they greatly enhance its effectiveness.

Vaccines used to be seen as low-technology, commodity products that fetched low margins in rich countries and none at all in poor ones. So unappetising were their prospects that most of the two dozen or so firms that made vaccines in the 1970s abandoned the business. But now things are looking up. Creative financing from multilateral donors (in the form of "advance market commitment") and non-governmental outfits such as the GAVI Alliance is spurring interest in the neglected diseases of the poor world. And in the rich world, purchasers of vaccines are increasingly receptive to the notion that a pricey jab today may be much cheaper than paying to treat a serious malady tomorrow.

Accordingly, the vaccines industry has been growing at double-digit rates. Wood Mackenzie, a market-research firm, expects sales to increase from $10.9 billion in 2005 to $18.2 billion in 2010 (see chart). Pfizer, which left the field in the 1970s, got back in by acquiring PowderMed, a British firm, in 2006. Novartis, a Swiss drugs giant, paid some $5.7 billion to finalise its acquisition of Chiron last year. Even Carl Icahn, a renowned corporate raider, has entered the fray. Last month he bought shares in MedImmune, an American vaccine firm.

The biggest boost to the business came from mapping the human genome. This increased the number of targets available to vaccine developers and led directly to the development of Novartis's new meningitis-B vaccine, for example. Viren Mehta, an industry analyst, reckons the genome may open the door to vaccines for extremely complex viruses such as HIV, and for non-viral afflictions like allergies.

Manufacturing and delivery mechanisms have improved too. Most vaccines are still made in a cumbersome process involving weakened or inactivated viruses or bacteria, but researchers are making progress on "recombinant" vaccines, which involve genetic modification. The future may also be needleless. PowderMed caught Pfizer's eye because of its nifty helium-powered, hand-held device that delivers vaccines by firing DNA-laced gold particles into the skin. And a study published in the *New England Journal of Medicine* last month found that a new version of MedImmune's nasal spray, initially a flop, is more effective than conventional flu jabs in babies and children.

Recombinant vaccines, modern manufacturing processes and the use of innovative adjuvants could also make the industry much nimbler. At the moment it takes months to produce new vaccines, which is too slow to respond to fast-mutating viruses. And since adjuvants can make a small amount of vaccine go

much further, they could also boost the industry's manufacturing capacity, says Dr Monteyne.

A further benefit of adjuvants, suggests Cole Werble of the RPM Report, an industry newsletter, is that they will allow for greater product differentiation, liberating future vaccines from the commodity-pricing ghetto and pointing the way to a new business model. Indeed, there are signs that this is already happening.

Wyeth, an American firm, led the charge with Prevnar, a pneumococcal vaccine, which in 2004 became the first vaccine to reach a billion dollars in sales. The key was a price tag of over $200, about as much as all other childhood immunisations combined. Merck tried to follow suit with Gardasil, a new vaccine that protects against a sexually transmitted virus that can cause cervical cancer. But its heavy-handed campaign to convince American states to mandate the vaccine was shot down by “family values” lobbyists who think the vaccine will encourage promiscuity. That points to one reason the fledgling revival of the vaccine sector may yet flounder: politics.

Even in market-minded America, vaccines are seen as a public good, so firms must tread carefully as they try to secure sweeping mandates and squeeze massive profits out of costly new vaccines. Wendy Woods of the Boston Consulting Group also warns that clinical trials for vaccines are much bigger and hence more costly than for new pills.Given all this, Jörg Reinhardt of Novartis says he expects the industry to earn profit margins of 20-25% at best—better than the 15-20% margins seen in the generics business, but far below the 33% margin on branded pharmaceuticals. But given the dismal returns associated with vaccines in the past, that still represents quite a shot in the arm.

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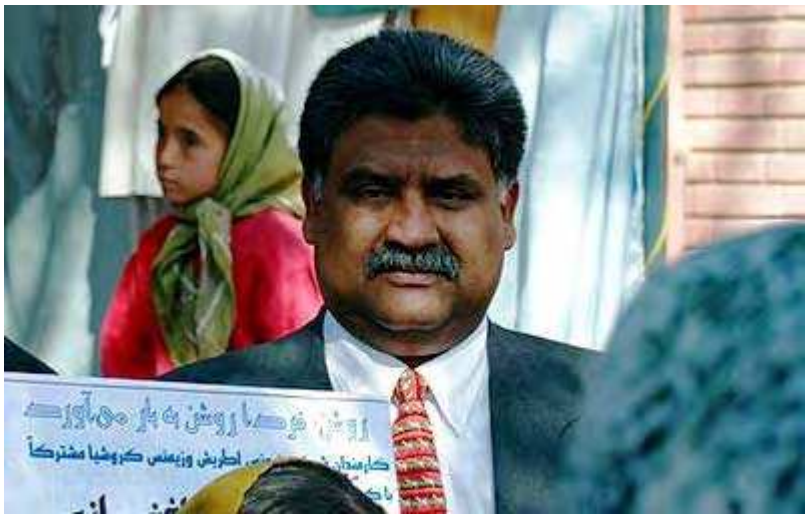
Face value

Shining a light

Mar 8th 2007
From The Economist print edition

Think your customers are difficult? Karim Khoja must cope with the Taliban

Roshan



"THEY may be Taliban, they may be warlords, who cares?" asks Karim Khoja, rhetorically. "We are apolitical—they are customers." Nobody could accuse Mr Khoja of being narrow-minded. Indeed, his easy-going approach has allowed him to build a successful mobile-phone business in one of the world's least hospitable markets, war-torn Afghanistan. One legacy of more than two decades of occupation, fighting and terror—and little in the way of economic activity before that—was that Afghanistan did not have much of a traditional fixed-line telecoms infrastructure. This presented a chance to leapfrog the old technology and go straight to mobile phones. A mobile-phone network requires a lot of radio masts, however. Whether they remain standing, especially in remote parts of Afghanistan, depends on the goodwill of the locals. Hence Mr Khoja's customer-centric philosophy. "When we go to a village, we talk to the elders and explain how when a mast comes to an area it brings jobs and economic growth," he says. He adds, not entirely reassuringly, that everybody in Afghanistan, including the Taliban, understands the importance of being able to communicate.

To date his firm, Roshan, which means "light" in the country's two most popular languages, has not lost a single radio mast, although a significant proportion of its network is in areas said to be controlled by the Taliban. An Indian worker employed by a contractor to Roshan was kidnapped and executed in Kandahar last April, but the circumstances of the crime do not indicate any general hostility towards the firm, insists Mr Khoja.

Roshan has prospered despite its stated refusal to bribe, a scruple that Mr Khoja hints is not shared by all his competitors. Phones and pre-paid phone cards have become a popular alternative currency in Afghanistan, as in many developing countries, but "we don't hand them out to win favour," he says. "Unless we start training the Afghan people that *baksheesh* is wrong, there will always be expectations."

It may help that Roshan is 51% owned by the for-profit arm of the Aga Khan Development Network. (The other owners are Monaco Telecom, now part of Britain's Cable & Wireless, and MCT, an American venture-capital fund.) Although the Aga Khan's Ismaili strand of Islam differs markedly from the Taliban's, his was one of the few international non-governmental organisations allowed to operate in Afghanistan under their rule. Roshan seems to have benefited from the goodwill this created.

A typically business-minded Ismaili, Mr Khoja went to work as an unpaid volunteer at the Aga Khan Foundation in 1998 after “retiring” at the age of 40 from a lucrative career in telecoms that included stints in Canada, Britain, Croatia, Pakistan and Poland. Born in South Africa and educated in England, Mr Khoja has travel in the blood. His retirement did not last long. He started working in Afghanistan in 2002 and became Roshan's paid chief executive after it began operations in 2003 as the first competitor to the government-owned incumbent.

Today Roshan has over 1m subscribers, around 55% of a national market that has grown rapidly and will soon be served by five national and two regional operators. All this competition has driven down prices from around $3 per minute to less than 10 cents. That said, roaming charges for foreign visitors are high. The growing number of “extreme tourists” visiting Bamiyan, the site of the Buddhas destroyed by the Taliban in 2001, “don't care how much they pay for calls,” says Mr Khoja. This has created an unexpectedly profitable market for Roshan.

The company is Afghanistan's largest taxpayer, largest investor (over $250m so far, with a further $75m planned this year) and largest employer, claims the ebullient Mr Khoja. As well as its staff of 800, around 20,000 people earn a living either by running “public call offices” (earning a princely-for-Afghanistan $150 a month) or selling pre-paid phone cards ($50 a month). Some franchises were given to former *mujahideen* soldiers in return for handing in their Kalashnikovs.

Afghan idols

Mr Khoja is particularly proud of his firm's marketing, which has made Roshan the “brand of brands, bigger than Coca-Cola in Afghanistan”. Its slogan, *Nazdik Shodan* (“getting closer”) is hugely popular. The firm sponsored the Afghan equivalent of “American Idol”, a television talent contest, though this nearly backfired when Roshan's failure to send a text message confirming the receipt of votes led to a protest outside a call centre in the losing contestant's town. It ended only when the loser turned up in person to say the result was fair.

But such mishaps are rare. Things are going well enough that Mr Khoja now spends only a couple of weeks a month in Afghanistan, devoting the rest of his time to working for the Aga Khan Fund for Economic Development, and cheerleading abroad for Afghanistan. Last week he was in New York to receive an award for Roshan's corporate philanthropy. He made the most of the opportunity to tell some of America's leading bosses how well his firm was doing.

Perhaps the biggest constraint on Roshan's growth is the worsening violence in some parts of Afghanistan, which Mr Khoja attributes partly to the attention of Afghanistan's foreign allies shifting elsewhere, at least until recently. Roshan has had to stop building in parts of the country where NATO troops are trying to reverse recent Taliban advances.

Mr Khoja remains ever the optimist, though perhaps not entirely apolitical. “If guys like me keep telling Americans about the good things happening in Afghanistan, maybe that will keep their attention on it,” he says. “If Americans see that the Afghan people want them and are worth investing in—well, they are a lot likelier to succeed in building Afghanistan than they are sorting out the mess in Iraq.”

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Markets

It's behind you

Mar 8th 2007 | LONDON AND NEW YORK
From The Economist print edition

Should twitchy markets scare us?

Getty Images

"WHAT'S that coming over the hill? Is it a monster?" The Automatic, an indie-rock band, might almost have written its recent hit with the stockmarket in mind. Most people struggle to muster much sympathy for overpaid Wall Street traders when share prices are falling. What they worry about is a market decline that seems to anticipate—or even cause—an economic downturn. So the gyrations of the S&P 500 index probably matter less to the average American than the view of Alan Greenspan, the much-respected former chairman of the Federal Reserve, that there is a one-in-three chance of a recession in America this year.

Stockmarkets, with their habitual perversity, took Mr Greenspan's remarks as the cue for a sharp rally on March 6th, even though the great man's vaguer and less alarming comments a week earlier had helped trigger a brutal sell-off. Perhaps investors are paying more attention to the present Fed chairman, Ben Bernanke, who has sounded more sanguine.

And yet the data have favoured Mr Greenspan. There has been a sharp fall in HSBC's activity-surprise index, which reflects whether economic numbers have surpassed or fallen short of expectations. A weaker-than-expected services-sector survey was followed by a surge in American unit labour costs, a fall in pending home sales and a 5.6% drop in factory orders, all seemingly negative indicators.

A look back at the past week or so suggests investors are indeed worried about economic growth. The assets that have sold fastest have been growth-sensitive ones—shares, commodities and emerging markets—whereas Treasury bonds have risen. Within stockmarkets, defensive shares, such as food producers, have done better than cyclical ones, such as miners.

Market turmoil also matters because financial services play such an important part in many developed economies. In America the industry makes up more than 30% of profits. Wall Street's big securities firms were on top of the world only weeks ago, basking in record profits and handing out bonuses to make Croesus blush. Last year was the best ever for the five biggest firms, which made combined profits of more than $30 billion.

But when markets started to fall on February 27th, the shares of investment banks fell faster than the rest (although they also recovered more sharply on March 6th). Rising markets tend to be good for banks, boosting the profits of their trading arms and encouraging share and debt issuance, both of which earn fat fees; in falling markets the reverse applies. In addition, the turmoil in the subprime mortgage market, and

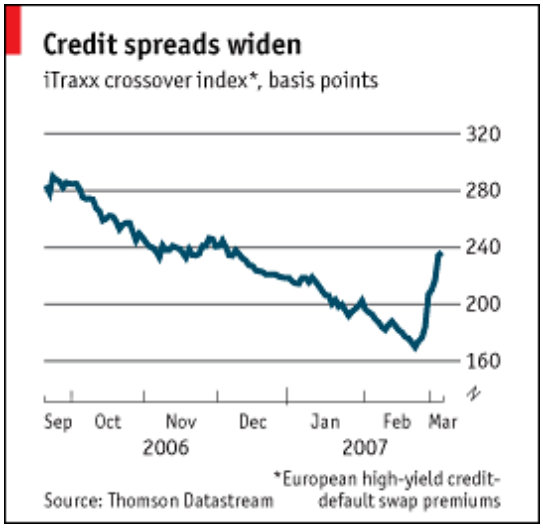
the associated tightening of credit standards, may itself damage growth prospects, by hitting house prices and thus consumer demand (see article).

Fears over the banks' fate also showed up in derivatives markets. Moody's, a rating agency, recently pointed out that the credit-default swap (CDS) market—in which investors pay for protection against firms' failure to repay their debt—was giving Goldman Sachs, Merrill Lynch and Morgan Stanley an implied rating only two levels above "junk". Though traders in the CDS market tend to be more bearish than bond investors, these are hardly encouraging signs. If the fears lead to lower actual ratings from agencies like Moody's, the banks' borrowing costs will rise.

The credit markets, to which the banks are naturally exposed, have long looked like an accident waiting to happen. In late February the interest-rate margins above Treasury bonds on high-yield corporate and emerging-market debt were very low by historical standards. Some narrowing of these spreads was justified by the fundamentals. Emerging economies are a lot stronger than they were ten years ago, with many enjoying current-account and budget surpluses. Surging profits have kept the default rate on corporate debt down to very low levels.

But investors probably became too complacent. According to Martin Fridson, a credit strategist, spreads in late February no longer reflected the return needed to compensate investors for the historic default rate on bonds. That is especially odd given that the credit quality of bond issuers has steadily deteriorated in recent years, as fewer and fewer companies have achieved the prestigious AAA rating.

Credit spreads have widened again during the sell-off. The cost of insuring against default in the European high-yield debt market rose by almost 50% in a week (see chart). Higher costs for borrowers could prove to be a drag on economic activity.



Another element of the financial system that has caused concern is the "carry trade", where investors borrow low-yielding assets to invest in higher-yielding instruments. Japan's low interest rates have made the yen the chief target for the trade in recent years.

When the storm broke, investors reversed their bets. The yen, which briefly touched 122 against the dollar early last month, rose to 115.2 on March 5th before easing back. The big gains for the yen were against currencies where the "carry", the differential with Japanese interest rates, is large—the Australian and New Zealand dollars and the pound (see article).

It is tempting to believe the yen's movements have been fuelling recent events. But that may be simplistic. Stephen Jen, a currency strategist at Morgan Stanley, believes the equity and credit markets were the main arenas for a rethink on risk. Once these markets stirred, hedge funds were compelled to exit their riskier trades wherever they could. The liquid currency markets were an obvious place to start.

In any case, hedge funds were not the only ones who had been nudging the yen lower. A big part had been played by Japanese savers searching for higher returns overseas. They might limit the yen's rise. David Woo at Barclays Capital reckons that, each time the yen strengthens towards 115 to the dollar, Japanese funds will find it hard to resist the temptation to buy "cheaper" overseas assets—and start bidding down the yen again.

Sinking subprime mortgages, risky credit markets, reversing carry trades—any one might be the harbinger of bad economic news. Many monsters turn out to be a figment of the imagination, but this one seems more solid than most.

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Buttonwood

We all fall down

Mar 8th 2007
From The Economist print edition

Why investors were not as diversified as they had thought

DON'T put all your eggs in one basket. Investors are taught at stockmarket elementary school that the secret to avoiding financial disaster is to make sure they diversify their portfolios.

But when markets plunged on February 27th shelter was pretty hard to find. First China fell, then European markets, then Wall Street. Emerging markets suffered. Corporate-bond spreads widened (in other words, their prices dropped). Oil declined. Even gold, a supposed “store of value”, took a hit. Only the yen and government bonds gained ground.

This marching-in-step has been described by Henry McVey, a Morgan Stanley strategist, as a “market of one”. Diversification did not bring the benefits that investors might have expected.

Perhaps it should not be too surprising that, according to Merrill Lynch, over the past five years the Russell 2000 index of small American companies has a 94% correlation with the S&P 500, the main Wall Street index. More alarmingly, international stockmarkets have not offered any diversification either: they have shown a 95% correlation. Yet more startling are the figures showing that hedge funds have recorded a 94% link with shares. Even property has been following Wall Street 81% of the time.

Why should this be? The obvious explanation is the much-touted “excess liquidity” that has been driving up one asset price after another. There is a healthy debate about how to measure this liquidity, or indeed whether the term has any real meaning. But most people agree that the savings surpluses in Asia and the oil exporters have played an important part in fuelling financial markets. JPMorgan estimates that global liquidity increased by $3.9 trillion between 2002 and 2006, of which around 50% came from Asia and 40% from the oil producers.

The bulk of this money went at first into risk-free assets such as Treasury bills and bonds. That drove down the yield on such assets. So other investors were then naturally tempted to look elsewhere for higher returns.

Meanwhile, pension funds have been trying to reduce the bets they have made on shares. This combination has unleashed a “chase for yield” as any asset with an above-average income (or which offered the prospect of above-average returns), has been driven up in price. More speculative investors have been tempted to borrow at the risk-free rate and invest in risky securities, one version of the talked-about “carry trade”.

As more money has chased these risky assets, correlations have risen. By the same logic, at moments when investors become risk-averse and want to cut their positions, these asset classes tend to fall together. The effect can be particularly dramatic if the asset classes are small (as in commodities). A few sellers can have a big impact on prices.

This makes it hard to say which asset market is leading the sell-off, whether it is China tripping up Wall Street, or the yen/dollar rate pulling down corporate bonds. Investors are rather like those circus acts who spin plates on top of poles; once one plate starts to fall, the performer must rush to attend to it, risking that others will fall while his back is turned.

The growing importance of hedge funds also makes a difference to correlations. Hedge funds have two important characteristics: they aim to produce absolute returns (in other words, they hate to lose money), and they borrow to enhance returns. That combination makes them quick to cut their bets when prices move against them. In the old days, when pension funds dominated the market, they could (in theory)

ride out fluctuations, because of their long-term horizons.

The result, suggests Tim Bond, a strategist at Barclays Capital, is a market with long periods of subdued volatility, as asset prices slowly rise, interspersed with violent corrections, as in May 2006 and the recent sell-off.

How, then, can investors find true diversification from the stockmarket? One answer is to look for assets, such as weather derivatives, that have not yet been discovered by the herd. Another is to use the oldest trick in the book and buy Treasury bonds, the safest of safe havens. Over the past five years Treasury bond prices have tended to move in the opposite direction to shares.

This was not always so. During the 1990s, when inflation and short-term rates were falling around the world, stockmarkets and government bonds tended to move together. That pattern changed after the dotcom bubble burst, as investors fled for safety.

The recent outperformance of Treasury bonds shows that the markets are really worrying about economic growth, rather as they did in 2000-02. Were inflation the scare, investors would be buying commodities. So before investors diversify, they should choose which risks they are trying to avoid.

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Subprime lending

Rising damp

Mar 8th 2007
From The Economist print edition

Will turbulence in America's subprime mortgage market spread?

LAST November the American publisher of those bright-yellow books that claim to help “dummies” master everything from trigonometry to anger management released “Flipping Houses for Dummies”. It promised to teach would-be property moguls how to “lay the foundation for successful flipping and bring home the bucks”. Four months later, it is the seemingly indomitable housing market that has flipped. One of its main engines of growth, the subprime-mortgage industry, is in free-fall. Where it lands is anyone's guess.

Subprime-mortgage lenders offer higher rates of interest to borrowers who have blemished credit histories. Almost three dozen of the lenders have gone bust or been sold in recent months, as loans have soured. Late payments swelled to around 12.6% last autumn, according to Morgan Stanley, up from about 7% at the end of 2003. The future for many other lenders looks scarcely brighter. On March 2nd Fremont General, a Californian lender, disclosed plans to dump its subprime business after regulators forced it to stop making loans that violated federal guidelines.

On the same day New Century, another battered lender, said it faced a probe into alleged insider trading. It may not be around long enough to defend itself. The firm, which expects to have lost money in 2006, has breached its contracts with many of the banks that lend it cash for day-to-day operations. The share prices of New Century and its beleaguered subprime brethren plunged on March 5th, the first day of trading after a torrent of bad news, although they later rebounded a bit.

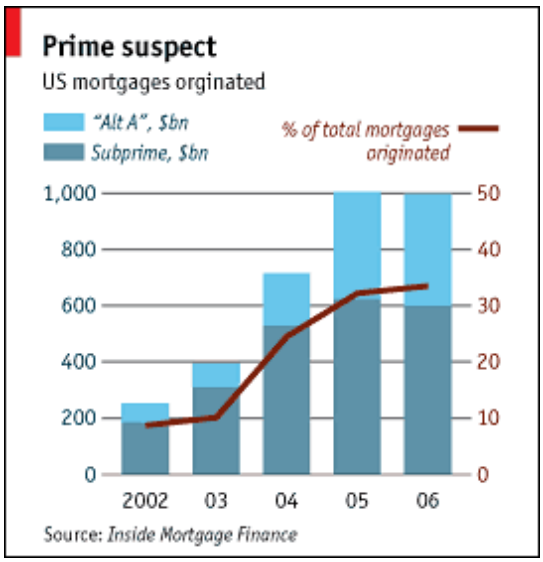
Big lenders, too, have been burnt. General Motors, the world's biggest carmaker, may have to take a charge of almost $1 billion to cover the bad mortgage loans of its subsidiary, Residential Capital, says Lehman Brothers. HSBC, Europe's biggest bank, saw its bad-debt costs soar by 36% to over $10 billion in 2006 because of sloppy lending. Its chief executive, trying to reassure investors, said: “This is not trailer-park lending...this is Main Street America.”

Yet that is precisely the problem. Subprime mortgage loans made up over a fifth of all originations last year, according to *Inside Mortgage Finance*, a newsletter, up from 6% in 2002 (see chart). Lenders, intent on keeping fees flowing as the housing market began to cool in 2004, pulled an ever wider swathe of Main Street America into the housing market. They lowered underwriting standards and offered a bevy of “affordability” products like extra-long-term or “interest-only” mortgages (in which principal payments are deferred for a time) and loans with low teaser interest rates, known as hybrid mortgages, that balloon after a few years. Indeed, most subprime mortgages written in the past three years were “risk-layered”, using a combination of various inducements to make a mortgage more attractive to borrowers but also much riskier.

The “FICO” credit scores on which mortgage lending often relies did not capture this risk layering. Scores were probably inflated. David Hendler of CreditSights, a research firm, says around 40% of a FICO score is based on repayment history—but these records were “artificially rosy” because of the recent housing boom.

Now rockier times lie ahead. Three-quarters of the subprime loans written in 2004 and 2005 were hybrid ones that will see interest rates jump starting this year. Many were underwritten assuming borrowers would refinance into new, cheaper mortgages before this happened. But interest rates are higher than they were and lending standards have tightened, making it harder for borrowers to qualify for new loans. Many borrowers

have so much debt—$191,090 on average last year according to Standard & Poor's—that they have little equity in their homes to borrow more against. Sagging house prices mean that selling homes to cover mounting debts may not be an option, either.



This could lead to credit losses and foreclosures. Credit Suisse thinks “marginal” borrowers make up a third of subprime loans. But banks and holders of securities backed by these mortgages could get hit too. Spreads on subprime-mortgage-backed securities have widened sharply. Demand has dropped. New issues rated by S&P fell 29% in the fourth quarter of last year over the same period in 2005.

Others are scrutinising “Alt A” mortgages, underwritten with little or no documentation of, say, a borrower's income. Arrears have risen sharply, too, although they are nowhere near as high as in subprime. Around $400 billion of such loans were written last year, which is 13% of the total market and the fastest-growing chunk of it. Fitch, a ratings agency, reckons that mortgage loans underwritten with less-than-complete documentation standards made up over half the subprime loans.

The effects of a dramatic slowdown, or credit crunch, in the subprime and the Alt A market could spread. The stock of unsold homes would remain unsold longer, crimping house prices. Consumer spending might slow. Investors might shy away from securities backed by prime mortgages and other assets, not just subprime ones, pulling liquidity out of the market.

Not everyone is so pessimistic. Bargain investors are on the prowl. Last week Citigroup agreed to put money into ACC Capital, the parent of Ameriquest Mortgage, a struggling lender. Citadel, a huge hedge fund, beat Credit Suisse when it snapped up ResMAE, a newly bankrupt subprime-mortgage lender, for $22m. The bet is that when the subprime mortgage market turns around, Citadel and others will be ready.

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Stock exchanges

Dodgy tickers

Mar 8th 2007
From The Economist print edition

Accurate information can make—or break—exchanges

IN the absence of reliable, up-to-date information, markets go awry. The lack of accurate data—in this case, an hour-long lag in reporting the Dow Jones industrial average—dealt just such a blow to equity markets on February 27th.

The volumes on dramatic trading days mean that glitches always seem to happen when they are least welcome. The Dow's hiccup coincided with problems in an order-routing network at the New York Stock Exchange (NYSE) that led traders to jot orders on scraps of paper. Both contributed to the volatility of a session in which the Dow suffered its biggest loss in almost four years.

The NYSE was not alone. Euronext, a pan-European exchange merging with the NYSE, halted trading for about 20 minutes on February 28th as a “preventive measure” when it was hit with a surge of trades just before the close. The Tokyo Stock Exchange has suffered several big meltdowns in the past year.

Today the battle between big exchanges and newer trading venues (including all-electronic networks and regional exchanges) is increasingly fought over technology—particularly the upgrades and capacity increases needed to shave milliseconds off the response to rapid-fire algorithmic trading systems.

Some big exchanges have seen data demands double annually in recent years. This is a result of the ravenous messaging demands of customers—chat about potential buy and sell orders is increasing far faster than trades—as well as new rules (in both America and Europe) that will open established markets to competition from new trading venues. The pilot phase of a rule aimed at granting American investors more choice and a better view of the market in share-trading took effect on March 5th and is to be phased in over the coming months.

These expansions are complex, but not as impossible as they sound—either for exchanges or investors. The availability of less expensive and more scalable hardware means exchanges can add capacity more cheaply. Unfortunately for the NYSE, which has adopted a “hybrid” system that incorporates both floor-based and electronic trading, it was stuck using some older order-routing technology (due to be replaced within a few months) when the markets wobbled on February 27th.

The new opportunities for investors were illustrated on the same day. When the NYSE system faltered, much stock trading shifted to NASDAQ and alternative exchange networks, which are using the newer systems. But some of them were also slower than usual that day, a sign that they, too, must keep investing in new systems.

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Sterling weakness

Bad company

Mar 8th 2007
From The Economist print edition

The pound stumbles as currency speculators cut back on risk

FOR a currency that ranks third behind the dollar and euro in official foreign exchange holdings, the pound has recently been keeping some louche company. As investors scaled back their risk exposure, the roster of falling currencies contained the usual suspects. The Australian dollar, the New Zealand dollar, the Brazilian real and the Turkish lira were all marked down during the market squalls, particularly against a resurgent yen. It seemed odd, though, that sterling should behave more like those racy high-yielders than a stable reserve currency.

Sterling dropped below $1.92 on March 5th, a low for the year, having traded as high as $1.99 in January. But it was the pound's 7% fall against the yen between February 27th and March 5th—a plunge as big as the Australian dollar's—that raised some eyebrows. Was the thoroughbred pound in fact a beneficiary of the carry trade, the strategy of borrowing cheaply in Swiss francs or Japanese yen to buy higher-yielding currencies?

No one knows precisely how big a role sterling played in such trades. Most market watchers believe that Britain ranks below Australia and New Zealand as a destination for cheap borrowed funds. What is clear, though, is that the weight of speculative bets on the pound, however these trades were funded, made it vulnerable to a correction once the markets started their retreat from risk. Over the past year sterling has become a favourite of currency traders because of Britain's strengthening economy and rising short-term interest rates, according to Adrian Schmidt, a currency strategist at the Royal Bank of Scotland. Acquisitions of British companies by overseas investors have given the pound an extra fillip. Foreign central banks have steadily increased their holdings of sterling, attracted by its high yield and liquid markets.

That kind of official approval is hard to resist, and sterling's upward momentum went unchecked until recently. But for all sterling's attractions, it does not look cheap. The OECD estimates that sterling's purchasing-power parity—the exchange rate that would bring the price of goods and services into line with those of other countries—is $1.62, more than 15% below the pound's low point on March 5th. Like other asset prices, sterling had risen too far, too fast. Its recent stumble is probably no bad thing.

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Insider trading

Hints, tips and handcuffs

Mar 8th 2007 | NEW YORK
From The Economist print edition

Retrofile

American regulators have declared war on insider trading

A WHISPERED aside in a bar, an indiscreet remark in an e-mail—this is the stuff on which inside trading thrives. But Blue Bottle, a Hong Kong firm fingered on February 26th by America's markets watchdog, the Securities and Exchange Commission (SEC), showed more chutzpah. It netted $2.7m trading on information it had gathered by hacking directly into computers to view press releases before they were published.

This is not the most egregious insider-trading case of recent days. That accolade goes to a ring of 13 bankers and fund managers, including ex-employees of UBS, Bear Stearns and Morgan Stanley. Last week they were busted by the SEC for trading illicitly ahead of mergers and analysts' stock-tips. What started as a ruse to repay a $25,000 debt allegedly spiralled into a lucrative scam as colourful as it was criminal. Mobile phones were binned to cover their tracks and cash passed around in Doritos packets. Some say the bust was the biggest blow against insider trading since Ivan Boesky was jailed and fined $100m.

That was 20 years ago. More recently, the SEC has lost its place in the vanguard of financial crime-fighting. In the rubble of the dotcom collapse, it was made to look flat-footed by Eliot Spitzer, then New York's attorney-general and now its governor. Keen to regain the lead, Christopher Cox, the SEC's chairman since 2005, has made fighting insider traders a priority. The commission must prevent any “buzz in the markets that you can get away with it,” says one of his officers, Walter Ricciardi. “Nothing paints a picture as well as people being led away in handcuffs.”

The SEC will act even when it has no one to put the cuffs on. Last week it filed a suit against unknown investors who had profited in the options market before the announcement of a takeover of TXU, the Texan utility. Over $5m of profits from these options has been frozen while investigators try to identify who bought them.

Insider trading is hard to quantify, but regulators see evidence that it is alarmingly common. The boom in mergers has provided more scope to make a dishonest buck ahead of deals. In Britain almost a quarter of takeover announcements in 2005 were preceded by suspicious price movements, according to the Financial Services Authority, the country's markets regulator. In America, reports of suspect trading patterns filed by the New York Stock Exchange to the SEC have doubled in the past two years.

It is not just the stockmarket. Someone, for example, was busy buying protection against default ahead of the takeovers of HCA, a hospital chain, and Harrah's, a casino operator. Trade volumes in such contracts can increase five- or tenfold in the days before a deal's announcement.

Banks have responded by tightening internal checks on wrongdoing. But these are only as good as the people who apply them. One of the 13 busted ring-members worked as a compliance officer at Morgan Stanley. It was “like the head of the CIA turning over secret info to Osama bin Laden,” as a pundit put it.

Banks' dealings with hedge funds are also coming under scrutiny. Hedge funds were big beneficiaries in the Morgan Stanley case and last September Linda Thomsen, the SEC's enforcement head, singled out insider trading by hedge funds as a particular threat. Mutual funds have long complained that Wall Street brokers give advance warning of big “block trades” to their favourite clients; and the apples of the brokers' eyes are increasingly hedge funds. As Roy Smith, a former Goldman Sachs partner, points out, these funds do vast amounts of trading, providing plenty of camouflage for illegal activity.

Others think hedge funds are a scapegoat. And a few, including the late Milton Friedman, a Nobel laureate in economics, think there is no sin to scape. He argued that insider trading should be legal, because it benefits all investors by quickly introducing new information to the market. Why should everyone have to wait for a company's press release?

This is not, of course, the defence the hedge funds themselves are making. Some are tightening restrictions on outside contacts, others hiring compliance officers, all in the hope of heading off fresh calls for regulation. A Treasury-led group recently said none was needed but congressional leaders, due to hold hearings next month, may think otherwise.

But as Friedman might have pointed out, the issue of insider trading is riddled with grey areas. At what stage, for instance, does sounding out interest among institutional clients for an upcoming corporate financing become something sinister?

These fine lines are one reason why cases against insider trading are so hard to build. It is rare to find a smoking gun. The SEC and others use algorithmic programs to catch unusual peaks and valleys in trading. Though cutting-edge, the maths takes them only so far. Proving intent, says Mr Ricciardi, requires plenty of “good old-fashioned detective work.”

Even the most brazen malfeasance can be hard to turn into a watertight prosecution. Eyebrows were raised in 2005, for instance, when a retired Croatian seamstress bagged over $2m from a series of sophisticated options trades in advance of Reebok's takeover by Adidas-Salomon. But building a case against the conspirators, led by a Merrill Lynch analyst, took many months of painstaking work, sifting through thousands of e-mails, brokers' statements and telephone records.

No doubt uncovering all the dirt in this year's cases will prove just as arduous. Perhaps investigators should hire some of Blue Bottle's nosy techies to help them.

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Indian commodities

Commodifying dissent

Mar 8th 2007 | MUMBAI
From The Economist print edition

High food prices threaten India's politicians and its futures markets

IN TWO bruising state elections last month, India's Congress Party suffered at the hands of voters angry about rising food prices. Now the government is looking for someone to take the blame. A day after Congress's defeat, the Forward Markets Commission, India's regulator for commodities markets, banned the writing of new contracts in wheat and rice futures, which set a price today for commodities delivered a month or more hence.

Reuters

The easy way to speculate

Trading in such contracts encourages hoarding, thereby raising prices, the politicians allege. Similar complaints led to a ban on futures trading in two varieties of pulses in January. A government panel led by Abhijit Sen, an economist from the Planning Commission, will examine these claims over the next two months.

The charges are baseless, according to traders and officials at India's two fledgling exchanges, the National Commodity and Derivatives Exchange (NCDEX) and the Multi-Commodity Exchange (MCX). They point out that rice futures are lightly traded. Outstanding contracts in wheat totalled only 89,000 tonnes at the time of the ban, tiny compared with annual wheat production of 69m tonnes. Indeed, if politicians had paid greater heed to the exchanges, they would have noticed that food prices may be about to turn. Futures prices for wheat had begun to fall even before the ban, in anticipation of a bountiful spring harvest.

Instead, the ban could kill growing interest in the futures market, as dealers fear that more food commodities may be added to the blacklist. Electronic trading in agricultural futures is only three years old, amounting to 8.85 trillion rupees ($195 billion) on the NCDEX in the 11 months to February 2007. The exchanges are not yet open to trading by foreigners, who appear keen to get in. Goldman Sachs bought a 7% stake in the NCDEX last year while Fidelity International owns a 9% stake in MCX.

The market still lacks adequate infrastructure, such as accredited warehouses and assaying facilities. This makes it difficult for sellers and buyers to settle futures contracts by physical delivery of the commodity rather than by cash. Madan Sabnavis, an economist at the NCDEX, says that if buyers could insist on taking actual delivery of the commodity, it would make it harder for speculators to manipulate prices in search of a cash profit.

Better regulation would help the market to grow and to introduce new products like options and index futures. The spot market for agricultural commodities, which is fragmented among 7,000 local markets or

mandis, would also benefit from more centralised electronic exchanges. A bill now sits before parliament that would make the FMC an independent regulator, rather than a handmaiden of the government's Ministry of Consumer Affairs and Food. Something for forward traders to look forward to.

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San Marino

Offshore, onshore

Mar 8th 2007 | SAN MARINO
From The Economist print edition

Maximising a mini-republic

THE 24 directors who oversee the International Monetary Fund need supple minds. On a single day last month they turned their attention to the Islamic Republic of Iran (where nuclear tensions are inhibiting private investment), the catastrophic Republic of Zimbabwe (which ignores the fund's advice and has not repaid its money) and then the idyllic Republic of San Marino. This hilltop enclave, completely surrounded by Italy, is the world's smallest republic bar Nauru. Land-locked, it nonetheless makes its living as an “offshore” financial centre.

Founded in the middle ages, the republic's long life has not always been serene. Earlier this decade, the fund points out, “growth was sputtering, public finances were precarious, and the economy was mired in [an] old-fashioned modus operandi.” Now, however, the IMF is pleased to report that its financial sector has been undergoing a “quiet revolution”.

Quiet, perhaps, but not entirely silent. In June 2005 the republic had its own big bang, when it set up a central bank with supervisory powers. New regulations on fund management were approved last September and the arrival of insurance companies is on the horizon. Banking liberalisation arrived a bit earlier, with eight institutions established in the opening years of this decade.

San Marino aspires to become a fully fledged financial centre, like Luxembourg, which offers light but firm regulation. It wants to avoid a reputation as a tax haven or somewhere dodgy to park questionable funds. It “must free itself of the cloudy name it has sometimes had,” said Stefano Macina, the finance minister.

The little republic also needs to keep on good terms with its big Italian neighbour, where tax evasion has long been a national sport, second only to football. Although banking secrecy remains fundamental to San Marino's success, its central bank has close working relations with the Bank of Italy. The director-general cut his professional teeth there and the head of banking supervision was formerly a senior officer in its supervisory service.

The secret of peaceful cohabitation, it seems, is to avoid being too keen in winning an edge over the neighbours—and to employ senior staff who once worked for the opposition.

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House prices

Home result

Mar 8th 2007
From The Economist print edition

Our quarterly look at the price of housing around the world

THE global housing boom has lost a lot of its vim. The annual rate of house-price inflation has eased since the last quarter of 2005 in ten of the 20 countries *The Economist* tracks each quarter.

America is one of them. In the year to the fourth quarter of 2006, the price index compiled by the Office of Federal Housing Enterprise Oversight (OFHEO), a regulator, rose by 5.9%, the lowest annual rate for seven years. The OFHEO index gives a more accurate picture than more timely series, because it tracks the value of the same houses when they are resold or remortgaged. As a result the index is not pulled this way and that by changes in the mix of houses sold.

The housing slowdown has already made itself felt in the GDP statistics, as homebuilders have cut back on construction. So far, it has not hurt consumption, the principal engine of the American economy. But that may yet happen. Flatter prices may encourage homeowners to rein in their spending. And troubles in the subprime mortgage market may spread, inhibiting lending to borrowers in better standing, and thus feeding back into prices.

American homeowners may take heart from the experiences of two other once-booming markets: Australia's and Britain's. Both stalled in 2005, yet both have clocked up house-price inflation of around 10% in the past year. However, the effects of recent increases in interest rates in Britain have yet to be seen. And Australia's official index, a weighted average of prices in eight capital cities, was boosted by booms in Perth (up by 36.9% in the year to the fourth quarter) and Darwin (17.6%). Prices in Sydney, the biggest city, fell a bit.

***The Economist's* house-price indicators**

% change

	Latest	Q4 2005	1997-2006
	on a year earlier		
Denmark	23.3	22.8	115
South Africa	14.7	17.8	351
Belgium	11.8	20.8	118
France	11.1	14.8	137
Canada	10.8	5.2	69
Spain	10.8	12.8	173
Ireland	10.6	8.2	253
Sweden	10.5	10.5	124
Britain	10.2	2.9	196
Singapore	10.2	3.9	*na*
New Zealand	8.8	15.8	105
Australia	8.3	2.3	135
Italy	6.2	7.3	92
Netherlands	6.2	5.5	97
United States	5.9	13.2	102
China	5.6	6.2	*na*
Hong Kong	3.0	8.0	-43
Switzerland	1.8	1.3	17
Germany*	0.7	4.8	*na*
Japan	-2.7	-4.7	-32

Sources: ABSA; ESRI; Hypoport; Japan Real Estate Institute; Nationwide; Nomisma; NVM; OFHEO; Quotable Value; Stadim; Swiss National Bank; government offices *New series

This quarter we have changed our German series to a monthly index compiled by Hypoport, a financial-services firm. Sales processed via its proprietary platform cover about 10% of the German home-mortgage market. Based on 4,000-7,000 sales a month, its price index should give a more up-to-date picture of the German market. Not that it makes pretty viewing: prices edged up by only 0.7% in the year to January.

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Credit ratings

No support here

Mar 8th 2007 | NEW YORK
From The Economist print edition

Government guarantees help banks, but hurt Moody's

THIS week Ben Bernanke, chairman of the Federal Reserve, offered some harsh criticisms of Fannie Mae and Freddie Mac, America's mortgage giants. Their enormous debt holdings could pose a threat to the economy, he told Congress, urging stronger oversight. Fannie and Freddie enjoy a de facto government guarantee. The duo's problems are also Uncle Sam's.

Which other financial firms might end up in the government's lap, were the worst to happen? Moody's, a rating agency, has started to ponder this question in earnest. It is rolling out a new way of rating big banks, the backbone of any economy, that takes into account their chances of being bailed out by the state if push ever came to shove.

JPMorgan, for example, would enjoy a 98% chance of government help were its depositors ever threatened, giving it a triple-A rating in Moody's new eyes. This safety net extends to nine others in America, including Wachovia and Wells Fargo, which both enjoy a 70% chance of a bail-out.

Many European banks can also count on the state's graces, Moody's reckons. Iceland's three big ones—Kaupthing, Glitnir and Landsbanki—were elevated to a triple-A rating, on a par with American Treasuries. Ironically, it was only last spring that Iceland's stockmarket tumbled over fears that its banking system was in trouble, a panic compounded by a negative report from Moody's.

Reaction to Moody's innovation has been scathing. CreditSights, a research outfit, called its report “Moody's Makes Aaas of Itself”. The ratings “add no value,” says Simon Adamson, the report's author, because investors already factor in the chances of a bail-out.

Tom Jenkins of Royal Bank of Scotland thinks Moody's has “completely missed the point” of bank debt ratings. Investors use them not only to measure the likelihood of a bank's collapse, which might prompt a government rescue, but also to gauge the risk of milder discomfort, such as late payment on a bank's debts.

Moody's retorts that the new ratings are meant to complement its traditional measures, not to replace them. But judging by the response of money managers, two metrics may be one too many.

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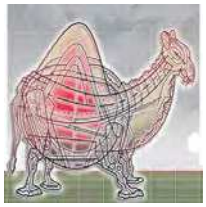
Economics focus

Anatomy of a hump

Mar 8th 2007
From The Economist print edition

What caused the Great Inflation? And what might bring it back?



IF YOU were to draw the path of inflation in the typical big, rich economy over the past half century, your picture would look much like a dromedary's back: a low flat line in the 1960s; a knobbly hump of high and volatile price rises in the 1970s; dramatic disinflation in the 1980s; and low, stable inflation rates since. Japan and Germany, which were quicker to quell inflation, are well-known exceptions. But for the rest, the shape and timing of the Great Inflation bulge look remarkably similar.

This is a bulge that today's central bankers are anxious not to repeat. So it is no surprise that several governors from America's Federal Reserve are attending a conference on March 9th to discuss a new report* on the Great Inflation, written by a weighty group of macroeconomists from academia and Wall Street.

Most scholars agree on a basic explanation of the hump, placing both blame and credit squarely on central bankers. Consumer prices accelerated in the late 1960s because monetary policy was too loose. German and Japanese central bankers realised this earlier than others and tightened policy accordingly. Eventually others followed suit, and general disinflation began in the early 1980s. Since then inflation has stayed under control because central bankers are credibly committed to price stability and far better at their job.

Beyond that broad tale lie several debates about important details. Economists differ on how much non-monetary phenomena, such as closer trade integration, affect the inflation process. They also offer competing explanations for why central bankers botched things so badly a generation ago. One possibility is that they simply got the numbers wrong, consistently overestimating their economies' speed limits. Others blame theoretical misjudgments, particularly the belief that higher inflation could buy a lasting drop in unemployment. A third approach emphasises political pressure. Inflation got out of hand because central banks were under the thumb of politicians who preferred rising prices to higher joblessness.

In this latest report the authors subject such controversies to painstaking cross-country forensics. They show that price stability across the G7 countries has been far more closely correlated than economic stability. Almost everywhere, inflation took off between 1969 and 1970. And every country, except Germany and Japan, failed to tame it until the mid-1980s. Output, however, was less tightly synchronised. Although recessions in many countries have become less wrenching in recent decades, output volatility began to ease in the mid-1980s in America, but not until the early 1990s in Britain, Canada and France.

What to make of these differences? The Great Inflation, because it was felt simultaneously across countries, must have had a common cause. This cannot have been the 1970s oil shocks, because consumer prices started accelerating long before the price of crude did. Easy money is the only remaining suspect. And although the Great Disinflation was also simultaneous across many countries, GDP growth settled down at very different times. This implies that better monetary policy cannot take full credit for today's less painful recessions.

The statistical magnifying glass also casts doubt on some favourite alibis for monetary misrule. Bad data, for example, do not get central bankers off the hook: revisions to statistics on trend growth and unemployment were not big enough to excuse the scale of inflation. Instead, monetary policy was simply too loose. The authors show that the central bankers of the 1970s failed to adhere to the modern “Taylor rule”, a formula that links the appropriate level of short-term interest rates to the deviation of output from its trend and inflation from its target. Of course John Taylor, a Stanford economist, did not formalise his rule until 1993. But even without this guide, central banks should not have flunked the basic tenets of sound money.

Hawks v camels

Neither the Taylor rule, inflation targets nor any other bits of the modern central bankers' toolkit were necessary to end high inflation. But the scholars think these tools have helped to keep inflation down, which, in turn, has spawned a virtuous circle. When inflation is low and stable, a temporary uptick in consumer prices has far less impact on long-term price trends. The economists' model implies that less than 1% of a temporary price surge is translated into a permanent rise in inflation today, compared with 60% three decades ago.

That may give today's policymakers more leeway than their predecessors enjoyed. But since this wiggle-room is the legacy of low inflation volatility, it cannot be taken for granted. Were central bankers to lose their guard, inflation could soon resurge.

More worrying, the economists pour cold water on many a policymaker's favourite gauge of his own performance, namely the public's expectations of future inflation. Central bankers often cite low inflation expectations as evidence that monetary policy is appropriate. That may be a mistake. This paper argues that expectations were a good guide to future price pressure only when inflation was high. But now, if anything, inflation expectations are a backward-looking indicator, lagging measures of actual inflation.

All told, this statistical sleuthing suggests today's central bankers have little room for complacency. Inflation remains low and stable because policymakers are vigilant, not because any deep, structural changes insulate the modern economy from price pressure. If central bankers relax, higher, more volatile inflation could easily return. Rudyard Kipling's camel, remember, got its hump for being “most 'scrutiatingly idle”.

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* “Understanding the Evolving Inflation Process” by Stephen Cecchetti, Peter Hooper, Bruce Kasman, Kermit Schoenholtz and Mark Watson.

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Marjorie Deane internship

Mar 8th 2007
From The Economist print edition

Applications are invited for the 2007 Marjorie Deane internship. This award, financed by the Marjorie Deane Foundation, is designed to provide work experience for a promising journalist or would-be journalist, who will spend three months of the summer at *The Economist*, writing about economics and finance. Applicants may also be considered, if they wish, for an internship of similar duration at *CFO Europe*, a sister publication of *The Economist*. Applicants should send a letter introducing themselves, with an original article of no more than 650 words that they think would be suitable for publication in this section of *The Economist*. Applications should be sent by e-mail to deaneintern@economist.com or posted to the Business Affairs Editor (Deane internship), *The Economist*, 25 St James's Street, London, SW1A 1HG. They must reach us by April 13th.

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Correction: Japan's personal spending

Mar 8th 2007
From The Economist print edition

Personal spending in Japan rose by 1.1% in the fourth quarter; not by 1.1% at an annualised rate, as we wrongly stated ("A hiker's guide to Japan", February 24th). Our apologies.

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Particle physics

Higgs may fly

Mar 8th 2007
From The Economist print edition

Physicists in America may have scooped their counterparts in Europe in the hunt for the source of universal mass

BUMBLEBEES cannot do it. Fly, that is. Or so physics is said to have shown. That the insects routinely become airborne demonstrates the shortcomings of some theoretical accounts of the world. Particle physics is in a similar state. The Standard Model that scientists have devised to describe the building blocks of nature is incomplete. One failing is the lack of a proven explanation for the existence of mass. Finding exactly what bestows this vital property on matter is the quarry of a global hunt.

Without mass the universe would be a sea of particles zipping around at the speed of light (the natural condition of any massless object). It would be hard for such particles to get together. Even molecules would be rare; galaxies, stars and planets would be impossible. So would life. So physicists want to find what enabled the universe to evolve in the way it has.

What they seek is a particle called the Higgs boson. Its existence was proposed in 1964 by Peter Higgs of the University of Edinburgh. He was trying to explain why some bosons (the particles that convey the fundamental forces which hold things together) have no mass whereas others have plenty of it. Photons, for example, transmit the electromagnetic force and are massless; W-bosons, which carry a short-range force in the atomic nucleus, are massive. So far, though, the Higgs has proved elusive.

To find it, scientists at the European particle-physics laboratory, CERN, in Geneva, are building what will, when it starts up later this year, be the world's most powerful particle smasher. This machine, known as the Large Hadron Collider, is designed especially to look for the Higgs boson. But the Europeans may be pipped at the post by rivals working at what is the highest-energy collider working today, the Tevatron, at the Fermi National Accelerator Laboratory (Fermilab) near Chicago.

Mass action

Several interesting results have emerged from the Tevatron over the past few months. Last December physicists working on it announced that they had measured precisely the mass of the W-boson, which theory suggests is intricately linked to the mass of the Higgs. The W-boson turned out to be heavier than expected, which implies that the Higgs may be lighter than previously thought. A measurement of the mass of another particle, the top quark, also made by physicists working at the Tevatron, showed that this particle, too, is heavier than theory had predicted—again implying a light Higgs.

One way of modifying the Standard Model to accommodate these observations is to add an idea called supersymmetry. This decrees that each of the known types of particle the model describes has an as-yet-undetected partner type that serves to balance its properties in a mathematically pleasing way. Some versions of supersymmetry predict several Higgs bosons, each with a different mass—and one version, called the “minimal supersymmetric model”, also predicts a relatively light Higgs to be among them.

The heavier a particle is, the more energy is needed to make it ($E=mc^2$). Hence the desire of physicists to build a more powerful machine than Fermilab's Tevatron. But a really light Higgs might be within the old workhorse's energy range.

In recent weeks a number of physicists have got excited about bumps in the data taken at two experiments at the Tevatron. A bump is usually a sign that something has gone awry, but if all possible sources of error have been eliminated, it can indicate the presence of a particle. That both experiments on the Tevatron ring have their new bumps at precisely the same energy is particularly intriguing.

Physicists are naturally cautious—at least in their public statements—and there are certainly not enough data to decide whether these bumps really are the first sighting of the Higgs. There is, nevertheless, a suppressed air of excitement at the laboratory. It still rankles among some American physicists that their own giant instrument-to-be, the Superconducting Super Collider, was cancelled for being too costly. If they have truly found the Higgs before CERN did, and have done so using a piece of fairly elderly kit, you may expect a few sardonic smiles on the lips of whomever it is from Fermilab that gets nominated to pick up the inevitable Nobel prize alongside Peter Higgs himself.

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Particle accelerators

Onwards and upwards

Mar 8th 2007
From The Economist print edition

Plans to build ever-grander particle-smashers collide with reality

NOT content with spending around $10 billion on a shiny new collider at CERN, the European particle physics laboratory in Geneva, physicists are now campaigning for its successor. The International Linear Collider (ILC), as the machine is dubbed, would cost a mere $8.2 billion, according to its backers. Ray Orbach, the head of America's Office of Science, gave a warning last month that, although he supports the project, it is too expensive to build rapidly. The first data to come from such a collider would probably not emerge until the mid- to late-2020s.

The machine would have two parts, each 12km (7.5 miles) long. One would accelerate electrons; the other positrons, their antimatter counterparts. The beams would collide at the centre of the device with far more energy than can be imparted by any other machine.

Two nearby detectors would record evidence of particles created by the impact. These could include Higgs bosons galore (see article) and so-called supersymmetric partner particles that are too massive even for the new collider at CERN. Physicists would love to develop a way of unifying the forces of nature (electromagnetism, gravity and so on) to produce a Theory of Everything. A machine with the power of the ILC might provide clues about how to do this. It could also cast light on the mystery of dark matter, a substance that pervades the universe in vastly larger quantities than familiar, visible matter, but whose existence can be inferred only by watching its gravitational effect on visible matter.

Exactly where such a machine would be built is a moot point—though it would certainly go in an underground tunnel, in order to reduce the effect of vibrations. For diplomatic reasons, three designs have been drafted. One is tailored to geological conditions at Fermilab, near Chicago. The second is suitable for construction at CERN. A third would be appropriate for a mountainous area of granite in Japan. The winner will probably be whoever has the biggest chequebook.

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About sponsorship

Cancer screening

Seeing is not always relieving

Mar 8th 2007
From The Economist print edition

Screening for lung cancer may do more harm than good

SOMETIMES you can know too much. The aim of screening healthy people for cancer is to discover tumours when they are small and treatable. It sounds laudable and often it is. But it sometimes leads to unnecessary treatment. The body has a battery of mechanisms for stopping small tumours from becoming large ones. Treating those that would have been suppressed anyway does no good and can often be harmful.

Take lung cancer. A report in this week's *Journal of the American Medical Association*, by Peter Bach of the Memorial Sloan-Kettering Cancer Centre in New York and his colleagues, suggests that, despite much fanfare around the use of computed tomography (CT) to detect tumours in the lungs well before they cause symptoms, the test may not reduce the risk of dying from the disease at all—indeed, it may make things worse.

The story begins last year, when Claudia Henschke of Cornell University and her colleagues made headlines with a report that patients whose lung cancer had been diagnosed early by CT screening had excellent long-term survival prospects. Her research suggested that 88% of patients could expect to be alive ten years after their diagnosis. Dr Bach found similar results in a separate study. In his case, 94% of patients diagnosed with early-stage lung cancer were alive four years later.

Survival data alone, though, fail to answer a basic question: “compared with what?” People are bound to live longer after their diagnosis if that diagnosis is made earlier. Early diagnosis is of little value unless it results in a better prognosis.

Dr Bach, therefore, interrogated his data more thoroughly. He used statistical models based on results from studies of lung cancer that did not involve CT screening, to try to predict what would have happened to the individuals in his own study if they had not been part of that study. The results were not encouraging.

Screening did, indeed, detect more tumours. Over the course of five years, 144 cases of lung cancer were picked up in a population of 3,200, compared with a predicted number of 44. Despite these early diagnoses, though, there was no reduction in the number of people who went on to develop advanced cancer, nor a significant drop in the number who died of the disease (38, compared with a prediction of 39). Considering that early diagnosis prompted a tenfold increase in surgery aimed at removing the cancer (the predicted number of surgical interventions was 11; the actual number was 109), and that such surgery is unsafe—5% of patients die and another 20-40% suffer serious complications—the whole process seems to make things worse.

Dr Bach's conclusion is that many of the extra cancers picked up by CT screening would never have caused clinical disease, while the most aggressive tumours—those that cause most of the 160,000 lung-cancer deaths in America each year—grow too quickly to be found early, even with annual CT screening. The situation resembles prostate-cancer screening, which relies on a blood test for a molecule secreted by prostate tumours. In prostate screening, a lot of disease is identified, but there is great doubt over the number of lives this saves. Dr Bach's research also resembles an earlier attempt to deal with lung cancer, in which researchers uncovered 20% more tumours in groups that underwent screening using chest X-rays than in those who did not. Then, too, the frequency of death from the disease did not differ between the two groups. Both Dr Bach and Dr Henschke had hoped that by using CT, which is better than X-rays at picking up small tumours in the lungs, they might have changed this outcome.

Dr Bach was comparing data from screened people with a model of what would have happened to an unscreened group. The final word on CT screening for lung cancer will have to wait for the results of a

proper experiment that compares screened and unscreened groups. These are expected in the next year or two. The omens, however, are bad. What you do know can hurt you.

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Animal behaviour

An offer you can't refuse

Mar 8th 2007
From The Economist print edition

How cowbirds run protection rackets

COWBIRDS, like cuckoos, are brood parasites—that is, they lay their eggs in the nests of other birds and leave those others to do the hard work of raising their changeling young. But there is a difference. A cuckoo chick usually pushes the original nestlings out, so that it can monopolise the food brought by its unwitting adoptive parents. Cowbird chicks, by contrast, seem to tolerate their nestmates.

That seems odd. So odd, in fact, that Jeffrey Hoover of the Illinois Natural History Survey and Scott Robinson of the University of Florida decided to look into the matter. What they found, as they report in this week's *Proceedings of the National Academy of Sciences*, is that the host bird's real chicks are pawns in a protection racket of a sort the Sicilian Mafia would be proud to have invented.

The victims of the racket are prothonotary warblers. These birds do not reject cowbird eggs even though they look quite different from their own. That in itself is intriguing, for cuckoos, again in contrast to cowbirds, lay eggs that mimic those of their hosts. Dr Hoover and Dr Robinson demonstrated what was going on by erecting 182 warbler nestboxes at the top of narrow, greasy poles. (The grease stopped any ground-dwelling predators getting close to the nests.)

The first phase of their study was observational. Over the course of six years, they watched 472 nests in which warblers had laid their eggs. Almost half of these were parasitised by cowbirds. But, parasitised or not, almost all—protected as they were from ground-based predators—successfully produced fledgling warblers.

Then the experiment began. In the following seasons Dr Hoover and Dr Robinson removed cowbird eggs from some of the parasitised nests. At the same time, they reduced the diameter of the entrances to some of the nest boxes, in order to deny admission to cowbirds (which are larger than warblers).

Warblers whose nests were thus protected did well, raising an average of four chicks to maturity in the absence of a cowbird parasite. Nests from which cowbird eggs had been removed, but which lacked protection, did badly. In fact, more than half of them were attacked. The eggs were pecked open and the nests themselves torn to pieces. Nests thus attacked yielded, on average, but a single fledgling, whereas those with a cowbird egg in them yielded three warbler fledglings. Paying protection money in the form of food for the cowbird nestling thus looks a good deal from the warbler's point of view, and explains why cowbirds do not need to disguise their eggs to look like those of prothonotaries.

The cowbirds' dastardly tricks do not stop at this protection racket, either, for a fifth of those warbler nests that had never had cowbird eggs in them also got destroyed. Dr Hoover and Dr Robinson ascribe this behaviour to a strategy they call “farming”. If warblers lose a clutch, they will often produce a second. If a cowbird female fails to lay in a warbler nest in time for her egg to hatch with those of the host, she can reset the clock in her favour by killing the first clutch. Even the Mafia never thought of that one.

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Argillaceous vulcanism

Inglorious mud

Mar 8th 2007
From The Economist print edition

How to control a volcano. Maybe

FOR nine months a torrent of scolding slurry has gushed out of the ground near Sidoarjo in eastern Java. Lusi the mud volcano is as busy as ever. Her flow has risen from an initial volume of 5,000 cubic metres a day to more than 130,000 cubic metres, according to a report in *Nature*. She has driven at least 24,000 people from their homes. She even threatens to sever the railway between Jakarta and Surabaya.

Mud, however, is not as hot to handle as the lava spewed out by more conventional eruptions, and a group of researchers at the Bandung Institute of Technology, led by Satria Bijaksana, have come up with a cunning plan to shut Lusi up. They are filling her 50-metre-wide mouth with concrete balls.

The method behind such madness relies on the assumption that Lusi's main vent opens from a narrow neck into a near perfect bowl, similar in shape to the top half of an egg timer. If all goes well the balls (which are linked, four on a chain, like fragments of a giant necklace) will clog the neck without plugging it completely. They will rest over it like small pebbles inside a timer designed for fine grains of sand. Mud would still reach the surface, but only via wiggly routes between the piled spheres. It would lose speed to friction and thus take longer to arrive in places where it was unwanted.

At least it worked that way in one of the Bandung Institute's laboratories, in an experiment that used a model made of plastic sheeting and a hose pipe. This experiment suggested the rate of flow could be cut by a half to three-quarters, which would help those in the path of the expanding, gooey lake to prepare by building adequate levees.

Some scientists have pondered—although mostly out of mischief—whether plopping concrete balls into Lusi might end up turning the volcano into a cannon. What seems more likely, should sufficient pressure build up, is that the mud will break surface somewhere else nearby.

Nothing that dramatic has happened so far. However, the first balls sank much deeper than expected, proving Lusi's plumbing is not laid out as the Bandung Institute's geologists had assumed. Some people think simply increasing the number of balls is the answer. Whether that will really help is as clear as mud.

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Satellite tracking

No hiding place

Mar 8th 2007
From The Economist print edition

If it flies, a proposed space-based animal-tracking system could observe almost anything on Earth

EARLY ornithologists, puzzled by the disappearance each winter of the local swallow population, suspected that the birds buried themselves in mud and hibernated. Not a stupid theory—after all, many mammals hibernate—but wrong. Working out bird migration patterns was one of the triumphs of natural history. First, birds were given coloured rings to wear on their legs, so that binocular-wielding “twitchers” from around the globe could see which went where. Now, larger birds can be fitted with radio transmitters powerful enough to be heard in space by satellites.

That, however, is not enough for Martin Wikelski of Princeton University. He wants to build a system that can follow birds of almost any size—and large insects, too. The rule of thumb used by zoologists is that a transmitter worn by a flying animal should weigh no more than a twentieth of the weight of the individual wearing it. The smallest transmitters powerful enough to talk to satellites now available for general use weigh just under ten grams. That sets the body-weight limit at 200 grams and thus disqualifies four-fifths of bird species and two-thirds of mammals as too small to track. But in a recent article in the *Journal of Experimental Biology*, Dr Wikelski and a group of like-minded colleagues from a range of disciplines proposed setting up a satellite-tracking system based on one-gram transmitters. The International Co-operation for Animal Research Using Space (ICARUS), as they call it, would revolutionise the way animal behaviour is studied, by allowing pests and disease carriers to be followed as well as by providing the answers to some important conservation questions.

If it worked, however, zoology might end up being the least of the system's uses. Like the world wide web, which started life as a way of linking files of particle-physics data, and the global positioning system (GPS), which was invented to tell American soldiers where they were, ICARUS might rapidly escape its inventors and become an icon of its own.

A low-flying high flier

Radio tags that weigh less than a gram already exist. But for them to emit normal radio signals strong enough to be picked up from space exhausts their batteries within a couple of weeks. Developing more powerful miniature batteries has proved hard. Instead, two of Dr Wikelski's collaborators, Alejandro Purgue and Robert MacCurdy of Cornell University, propose to tinker with the radio signal itself. They suggest adapting a technique called direct-sequence spread spectrum (DSSS), which has been widely used in both GPS and in probes that have been sent into deep space. This technique works by smearing the signal across a wider than normal part of the radio spectrum. That, in turn, allows it to be broadcast at a lower power. Of course, there is no free lunch, and DSSS requires a sophisticated electronic co-ordination between transmitter and receiver to pull the signal out of the background noise. But that sophistication can be loaded onto the satellite, where it does not contribute to the weight of a tag.

Dr Purgue and Dr MacCurdy think that if they use DSSS, it should be feasible to develop tags that weigh a gram and emit signals with a power of a milliwatt for several months, rather than a couple of weeks. Such tags could emit 128 different signals in parallel, allowing the collection of data about an animal's breathing rate, wing-beat frequency and heartbeat (if it were a species that actually has a beating heart) in addition to its geographical location.

One milliwatt, however, even if broadcast as a DSSS signal, would still be too weak to be picked up by today's satellites. So the other (and more expensive) part of ICARUS involves designing and launching a special satellite.

The first thing this satellite needs is a low orbit. The team reckons it needs to circle the Earth at an altitude of 500km (about 300 miles). GPS satellites, for comparison, orbit at 36,000km. Since such a lowly satellite would suffer from atmospheric drag, it would need its own propulsion system and a decent supply of fuel. It would also need good shielding and special electronics to filter the DSSS signal from the radio-noise created by the Earth, the sun and the rest of the galaxy.

Dr Wikelski's Princeton colleague, Jeremy Kasdin, who leads the satellite-design team, is confident that all this can be done by tweaking off-the-shelf equipment. He recently demonstrated a computer simulation of the idea to researchers at the Goddard Space Flight Centre, one of the main scientific establishments of NASA, America's space agency.

The next stage is to try out the radio-telemetry technology using aircraft—probably of the unmanned variety. Modern unmanned aerial vehicles (UAVs) are a cheap way to reach high altitude (though “high” is a relative term; a UAV can manage 40km, not 500km). And if this works, the team will start carrying the begging bowl round in earnest.

Too close to the sun?

That is the tricky part, of course. To raise even $50m, the bottom-end of their estimate of how much ICARUS will cost, they will either have to find a rich patron with a zoological inclination—a latter-day incarnation of one of the butterfly-collecting bankers of the 19th century, perhaps—or they will have to play up the non-zoological benefits of their scheme. A one-gram tag that could track something anywhere on the planet would surely attract a lot of interest from beyond the zoological fraternity. The British government, for one, seems determined to put a satellite tracker in every vehicle in the country.

If a sponsor does turn up, perhaps the team might consider changing the name. Icarus, after all, flew too close to the sun and fell back to Earth when the wax holding his wings together melted. It was his father Daedalus, the inventor of the wings, who made the legendary journey successfully. A new acronym, anybody?

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About sponsorship

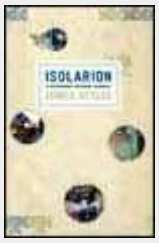
Oxford

Lost horizons

Mar 8th 2007
From The Economist print edition

James Attlee's anti-travel book on Britain's oldest university city is a gem

Isolarion: A Different Oxford Journey
By James Attlee



University of Chicago Press; 256 pages; $22.50 and £12

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FEW images of Britain are quite as distinctive as the dreaming spires of the Oxford skyline; few cities are more often visited and more nostalgically remembered, and few are more connected with the world of books. Yet little of the love and attention lavished on Oxford trickles down the Cowley Road, which starts on the wrong side of the Cherwell river, and winds up in the grungy industrial district that for decades epitomised Britain's inefficient and stroppy motor industry.

Indeed, the Cowley Road seems at first sight not just unloved, but outright unlovable. It has no glorious medieval buildings, their golden stone soaked with centuries of scholarship. C.S. Lewis did not drink there. John Ruskin did not draw it. J.R.R. Tolkien did not fantasise about it, nor did Lewis Carroll take any boating parties of little girls there. Even by the standards of the suburbs, it is unglamorous: north

Oxford's glorious red-brick town-houses inspired John Betjeman, the former poet laureate. It is hard to imagine even a limerick being written about the scrappy shops and tatty houses that lie to Oxford's east.

Yet James Attlee's scholarly, reflective and sympathetic journey up the Cowley Road is one of the best travel books that has been written about Britain's oldest university city. It is not—at least not directly—the Oxford of punts and gowns. His raw material is diversity: the Cowley Road as a corner of the outside world, where change and excitement are squeezed into the cramped hinterland of the scholarly theme park of the city centre.

Among his neighbours are “Jamaican, Bangladeshi, Indian, Polish, Kurdish, Chinese, French, Italian, Thai, Japanese and African restaurants”. And that is not all: “sari shops, cafés, fast-food outlets, electronics stores, a florist, a Ghanaian fishmonger, pubs, bars, three live-music venues, tattoo parlours, betting shops, a Russian supermarket, a community centre, a publisher, the headquarters of an international NGO, musical-instrument vendors, butchers (*halal* and otherwise), three cycle shops, two video-rental stores, post offices, two mosques, three churches, a Chinese herbalist [and] a pawn shop” all sit side-by-side with “a police station, two record shops, two centres of alternative medicine, a 24-hour Tesco, an independent cinema, call centres, three sex shops, numerous grocers, letting agencies, a bingo hall, and a lap-dancing establishment that plies its trade on Sundays.”

“Why”, he asks, “make a journey to the other side of the world when the world has come to you?”

Mr Attlee's own migration—he calls it a pilgrimage—is a haphazard and unhurried one, sometimes experienced alone, sometimes with companions. The central thread is interviews, recorded with shopkeepers and residents on an old-fashioned tape recorder. Mr Attlee weaves their stories with his own wry descriptions, and with acute historical references that range from the erudite but appropriate to the magnificently obscure (his vade-mecum is a disintegrating copy of “The Anatomy of Melancholy” by Robert Burton, an eccentric 17th-century Oxford cleric, who would have known the area as a lane leading to a leper hospital).

Mr Attlee likes his street, but he is no sentimentalist about a district that varies from the captivating to the callous. The first chapter describes a pub whose sign is a reproduction of “The Scream”, Edvard Munch's iconic depiction of existential angst. But its loud music, heavy drinking, slot machines and lamely punned menu (Screamburger, anyone?) celebrates just the sort of crassness that would have had poor Munch howling to the rafters. Perhaps, ponders Mr Attlee, the scream no longer symbolises alienation, but “the combination of fear and exhilaration that is the drug of choice for the young male”.

Three quiet student neighbours of his were mugged and beaten up after drinking there; when they returned from hospital later in the evening, they found the muggers had also burgled their home, stealing the laptops on which their PhD research (inevitably, not backed up) was stored. Plenty to scream about there.

“Isolarion”, named after a detail on a medieval map, is unsparing, but not bleak. It blends humour and passion, for example, in the author's entanglement in a local-government consultative exercise. Mr Attlee tries valiantly to understand, and then to frustrate, the well-meaning busybodies who want to prettify the road and clear its pavements of the sprawling wares of his beloved Asian greengrocers. Seldom has the suffocating atmosphere of local democracy in Britain—politically correct yet tone-deaf, participatory in rhetoric yet bureaucratic in spirit—been better captured.

The result blends a vivid account of daily life, fluid and unsettling, in a modern British town with powerful allegorical reflections on the connections between past and present, time and space, and high culture and the hard scrabble world that sustains it. Oxford may be the city of lost causes, and this book is indeed ambitious; it could easily sound sententious or twee. But it works, gloriously. After reading it, the visitor will not linger in the city centre but scuttle past the Radcliffe Camera and Magdalen Tower, over the Cherwell, and on to the Ultimate Picture Palace, where a projectionist, solemnly dinner-jacketed, shows art-house movies to a tiny and devoted audience.

Isolarion: A Different Oxford Journey.
By James Attlee.
University of Chicago Press; 256 pages; $22.50 and £12

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About sponsorship

Leni Riefenstahl

Hitler's friend

Mar 8th 2007
From The Economist print edition

NAZIS came in all shapes and sizes. Some were grotesque, many mere criminals. A few were clever, most were unthinking. Leni Riefenstahl was in a class of her own. She was never a party member and did not, overtly, commit any crimes. Indeed, she claimed through an astonishingly long life—she died in 2003, aged 101—that she was first and foremost an artist, never a Nazi propagandist.

In the 1930s she made two famous films which, only after the destruction unleashed by her compatriots in the second world war, became morally repugnant. She stood by those two films, “Triumph of the Will” and “Olympia”, long after the events they celebrated—the 1934 Nuremberg Nazi rally and the 1936 Berlin Olympics—had come to be seen as representative of the spectacle of evil, if not precisely of evil itself.

They were radical films technically, and won awards outside Germany. Riefenstahl's use of moving cameras, telephoto lenses, distorted perspectives and aerial photography captivated audiences. In both these and other now less famous movies, her revolutionary approaches towards music and cinematography remain unquestioned. The problems began—and they still continue—when the films' intentions, particularly those of “Triumph of the Will”, whose star is Adolf Hitler, are examined, as they have to be, outside an aesthetic frame.

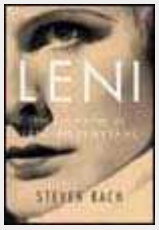
The woman behind “Triumph of the Will” had a rare hunger for success, and not just on the screen. Her sexual exploits in the 1920s, examined in impressive detail by Steven Bach, were operatic. Moreover, as Mr Bach reiterates, Riefenstahl's reaction on hearing of men—it was always men—of renown was often: “I must meet that man.” The central mystery of Riefenstahl, who though no intellectual was not stupid, is how her celebrity-chasing led to Hitler and how she allowed her artistry and, one has to assume, her soul to be corrupted by everything he stood for.

Was she a true Nazi? Neither of these new biographies answers the question categorically, though the material they present leaves little room to suppose otherwise. She had an active friendship with Hitler, her goggling admiration of him weirdly reflecting the lethal hero-worship of an entire nation: yet to that extent Riefenstahl was a German entirely typical of her time. Her films were partly paid for by the Nazi Party, though both authors struggle to tell us exactly to what extent.

This is not entirely their fault, as Riefenstahl, in interviews and in print (her memoirs appeared in 1987), was adept over decades at obfuscating the straight facts of her relations with individual Nazis, the party and their crimes. Several documents survive but they remain open to interpretation. That she herself was involved in choosing concentration-camp gypsies for a wartime film project, “Tiefland”, there is no doubt. She was never tried for this; and although she was held in detention by the Allies between 1945 and 1950, four separate investigations cleared her of complicity with the regime.

Mr Bach and Jürgen Trimborn (whose book first appeared in German in 2002) tell a riveting story and portray a fiercely opportunistic woman. Mr Bach's account is the racier, written with showbiz glee, titillating detail and an enumeration of lovers and liaisons which can prove wearing. Mr Trimborn takes a more plodding, Teutonic approach, but he knew his subject personally. His candid conclusion is that history has been kind to Riefenstahl; far more effort needs to be taken not to exonerate her.

Leni: The Life and Work of Leni Riefenstahl
By Steven Bach



Knopf; 368 pages; $30. Little, Brown; £25

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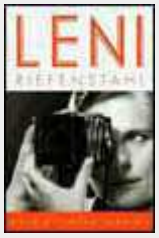
Leni Riefenstahl: A Life
By Jürgen Trimborn



Faber and Faber; 351 pages; $30 and £17.99

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About sponsorship

The role of economists

Soul academy

Mar 8th 2007
From The Economist print edition

ECONOMISTS sometimes liken the first years of their graduate training to “boot camp”, a sequence of punishing mental drills that they must endure before they can assail some economic territory of their own. Like fresh army recruits, they cheer themselves up with inspiring stories from the front-lines of the discipline, where they long to be.

Such tales of derring-do fill Diane Coyle's latest book, a breakneck survey of what economists have recently been up to. The front-lines, she shows, are no longer entrenched, or even firmly drawn. New territories are opening up to economists willing to raid and skirmish.

Even much-studied subjects, such as the industrial revolution, are being broached anew. Ms Coyle, a visiting professor at the University of Manchester, begins her book with a portrait of Newcastle-born Angus Maddison, who can still recall his uncle's soapbox protests against the evils of the Depression. From these beginnings Mr Maddison has become perhaps the world's greatest bean counter. He has calculated the national output of the world's principal economies stretching back a full millennium.

The Soulful Science: What Economists Really Do and Why It Matters
By Diane Coyle

Princeton University Press; 279 pages; $27.95 and £17.95

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These painstaking efforts have helped the re-examination of some long-standing controversies. Europe's rise, for example, has been attributed to its imperial plunder. But if, as Mr Maddison estimates, its living standards surpassed China's as far back as the 15th century, then its ascendancy must, surely, have earlier antecedents.

Such deep questions have long entertained grand thinkers. But the answers are more likely to come from “passionate nerds”, as Ms Coyle calls economists. These are people like Mr Maddison who dirty their fingers in the dusty stacks of remote libraries, calculating how much rice a Ming-dynasty labourer could afford on his daily wage. Their agonising respect for numbers is, she writes, testimony “to their philosophical and moral engagement and not, as many critics of economics assume, the opposite”.

If the wealth of nations is the founding question of economics, rationality is its signature assumption. But latter-day economists have lost some of their respect for *homo economicus*, as Ms Coyle shows in the second part of her book. Some portray him as weak-willed and ill-informed; unsure of what he wants, he is purblind in his pursuit of it. Most, however, still think he is a man they can do business with.

The third part of the book is the least satisfying. It assays what economics has borrowed from Darwin, and how much it now shares with sociology. As throughout, these chapters offer finely etched portraits of the main characters—Joseph Schumpeter, to take one, was an “irritating man”, who “boasted about his brilliance as an economist and as a lover”. He would show up at faculty meetings sporting jodhpurs and a hunting jacket. Douglass North, to take another, once worked as a photographer under Dorothea Lange, and had to choose between a career documenting the poor and one explaining their fate. But Ms Coyle's depiction of their intellectual contributions is smudged and indistinct—perhaps because the ideas themselves lack great clarity.

She believes the dismal economics of popular disdain—“Pangloss plus Gradgrind”, according to one caricature—has been superseded by an open and humane field of inquiry. This is not because economists have discovered their souls, but because they have availed themselves of richer numbers, faster computers and niftier techniques. Economists, she stresses, clung to their cold assumptions about rational individuals and efficient markets largely out of analytical habit, not ideological conviction. Teach

them a new technique and they will be open to whatever principles are smuggled in with it.

Unfortunately, Ms Coyle is preaching to the nerdy choir. Hers is the kind of book—stripped of equations and sprinkled with jokes—that economists hope will appeal outside the church. But Ms Coyle is a patchy writer and an impatient teacher. In trying to cover so much ground, she often lets go of the reader's hand.

Other popularisers have shown more pedagogical magic. On several occasions, Paul Krugman, for example, has explained the logic of a recession through the parable of a baby-sitting circle. William Easterly in “The Elusive Quest for Growth” has illustrated the limits of accumulation through an analogy with pancake-making. And then, of course, there is “Freakonomics” (described by Ms Coyle as an overrated “freak show”), which transformed Steven Levitt from a passionate nerd into a popular celebrity.

Though it should cheer many disillusioned students, working their way through their grad-school grind, Ms Coyle's book will probably not reach the outside critics of economics she hopes to convert. The dismal science has moved on; Ms Coyle is right about that. But so has the art of writing about it.

The Soulful Science: What Economists Really Do and Why It Matters.
By Diane Coyle.
Princeton University Press; 279 pages; $27.95 and £17.95

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Essays on fiction

Deep convictions

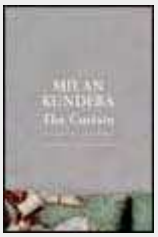
Mar 8th 2007
From The Economist print edition

THIS short book of seven linked essays is a swiftly told, beautifully crafted, pleasurable, pan-European scrutiny of the novel from François Rabelais in the 16th century onwards—an act of literary criticism by one of today's great practising novelists.

“The Curtain” is not a dispassionate book, written from the outside looking in, of the kind that you might expect from a journeyman critic. It is deeply informed by autobiography—as was “The Unbearable Lightness of Being”, Milan Kundera's most famous work, and all his other novels—and by the sense of his relationship to that ever-shifting entity called History. He is an actor on this book's stage, no matter how minor a part he might assign himself.

Mr Kundera was born in that country once known as Czechoslovakia. For more than 30 years he has lived in France, and his most recent novels have been written in French. He comes from a small nation that has been besieged, from first to last, by issues of identity: what is Czechoslovakia? Where did it come from? How does it relate to some entity called Central Europe? And what of the status of the Czech language? Issues of identity dog every one of his characters.

The Curtain: An Essay in Seven Parts
By Milan Kundera



HarperCollins; 168 pages; $22.95.
Faber and Faber; £12.99

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Mr Kundera brings similar levels of existential anxiety to this study of the novel. What is a novel? What is it for? What is its purpose? He makes big claims for the art of the novel. In fact, the reader might even regard this book as a defence of the novel against those who might wish to regard fiction as a mere diversion. Not at all, argues Mr Kundera. Great novels—and his exemplary figures are Rabelais, Cervantes, Henry Fielding, Laurence Sterne, Flaubert, Tolstoy, Kafka and James Joyce, as well as two lesser known authors, Witold Gombrowicz, a Pole, and the Viennese-born Hermann Broch—help us to understand “the ineluctable defeat called life”.

Mr Kundera opens up the novels of his choice like a clockmaker eager to demonstrate the inner workings of his favourite mechanisms. The novel, he argues, is about the elevation of prose. At its best, it is a compendious, portmanteau-like repository that captures “the concrete, everyday, corporeal nature of life”. It reflects unflinchingly back at the reader the sheer, comic absurdity of man's fallen humanity.

Each great novelist brings to the art his own special ingredient. Sterne showed how the insignificant could be utterly significant. Flaubert investigated the banal, the “mysterious power of the pointless”. Kafka's novels opened up a yawning “frontier to implausibility”.

To Mr Kundera, the novel is a liberating force, an enriching power without state borders, a vehicle that helps us to think about human situations in the round. In fact, it is the polar opposite of that slippery, disgusting, ever manipulable entity called History.

The Curtain: An Essay in Seven Parts.
By Milan Kundera.
HarperCollins; 168 pages; $22.95.
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One-man theatre

Voice of the masses

Mar 8th 2007 | NEW YORK
From The Economist print edition

A book on al-Qaeda and 9/11 has been adapted for the stage

Bruce Glikas

Playwright and actor

LAWRENCE WRIGHT spent five years researching Islamic radicalism for his bestselling history, “The Looming Tower: Al-Qaeda and the Road to 9/11”. He conducted nearly 600 interviews with terrorists, intelligence operatives and numerous other sources in at least ten countries. Now, in the spirit of Spalding Gray's fiercely angry one-man theatre show from the mid-1980s, “Swimming to Cambodia”, he has adapted his book for the stage.

First tried out on a live audience in Mr Wright's home town of Austin, Texas, “My Trip to al-Qaeda” opened in New York this week. In an understated production directed by Gregory Mosher, Mr Wright speaks directly to the audience from a bare set, anchored only by a desk and chair. He relates his personal experiences, as opposed to what he discovered in the reporting process, while photographs, maps and video footage appear on a projection screen behind him.

“It's a different way of giving people the news,” explains the enterprising Mr Wright. “The book is one kind of report, and this is a more intimate discussion.”

For example, Mr Wright emphasises his belief that the theme of humiliation, which runs through so many of al-Qaeda's video-taped sermons, is fabricated and then exaggerated for effect. While disturbing footage of an al-Qaeda recruitment video is displayed on the screen, Mr Wright pointedly translates its Arabic chants: “We have been humiliated. We have been humiliated.”

In a previous generation men such as Ayman al-Zawahiri, an Egyptian surgeon who became an Islamist radical, were indeed humiliated in prisons on the government's orders. Archival film footage from the 1980s shows Mr Zawahiri in prison, protesting at his inhuman treatment: “And they used the wild dogs,” he cries repeatedly. “And they used the wild dogs!”

It is hard to believe that this new crop of jihadists have been humiliated in quite the same way as their predecessors. Yet, as Mr Wright explains, al-Qaeda convinces them otherwise, holding America up as the perpetrator of degradation. From there it is but a step to using this sense of humiliation to create a moral framework for murder.

Even so, a powerful marketing campaign such as this one could not succeed without a pool of frustrated men to draw upon. When Mr Wright was researching his book, he took a job at the *Saudi Gazette* in Jeddah, Osama bin Laden's home town, mentoring a group of reporters—young Muslims whose lives were completely cut off from music, art, films, politics and intellectual life, not to mention the opposite sex. While shopping one day at a mall in Jeddah, Mr Wright and a few of his fellow male reporters spotted two women. Both were wearing the *niqab*, fully covered except for their eyes. (Saudi men call such women BMOs or “black moving objects”.) Pointing to them, his companions whispered, without any sense of irony, “Check 'em out!” Mr Wright compares Saudi Arabian culture to a hypnotised chicken. Repressed and depressed, warped by sexual apartheid, young Muslims there seem to exist in a social coma.

Mr Wright, who is a playwright and screenwriter as well as a journalist, uses excerpts from “The Siege”, a film he wrote in 1998 about Islamic terror in New York. “The Siege” came eerily close to forecasting

America's response to the September 11th attacks: the increased use of wiretaps, torture and racial profiling. In a later scene he also projects photographs of American soldiers terrorising Iraqi detainees with dogs in the Abu Ghraib camp. The similarities with Mr Zawahiri's torture are obvious. “And they used the wild dogs,” he repeats, showing how America has been playing into Mr bin Laden's hands.

This particular stage production of “My Trip to al-Qaeda” resists high-tech bells and whistles. However, a more elaborate use of video and graphics might support the material, not detract from it. Mr Wright says he has considered developing the material into a documentary, or even a graphic novel. “There's talk about having a real actor do it,” he adds with a smile. “I'm trying not to take it personally.” Whether journalism, theatre or a cross between, this powerful story and the fascination it exerts on its American public mean it is likely to live through many incarnations.

“My Trip to al-Qaeda” is at the Culture Project in New York until April 14th

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About sponsorship

Amazon worldwide bestsellers

Life at the top

Mar 8th 2007
From The Economist print edition

What fiction sells best? Shopping and magic, spying and murder

EVERYONE knows you can't buy the world's bestselling novel until July 21st. But what if you want a book you can read today? The choice is wide. There is Jed Rubenfeld on murder, Sophie Kinsella on shopping and a smattering of children in “Shopaholic and Baby” and “The Memory Keeper's Daughter”.

Only one book brings together spending, killing and kids, though. Never mind that the author employs a ghost writer to write his books, and that most of the chapters are only two pages long, James Patterson's new series (after Alex Cross and the Women's Murder Club) bowls right along. When New York's elite—billionaires, pop stars and politicians—are taken hostage at the funeral of a former first lady, only one man can save them. Step up detective Michael Bennett. After raising ten children, everything else is a piece of cake.

1. Harry Potter and the Deathly Hallows
by J.K. Rowling

Click to buy from Amazon.com or Amazon.co.uk

2. Step on a Crack
by James Patterson and Michael Ledwidge

Click to buy from Amazon.com or Amazon.co.uk

3. The Interpretation of Murder
by Jed Rubenfeld

Click to buy from Amazon.com or Amazon.co.uk

4. Suite Française
by Irène Némirovsky

Click to buy from Amazon.com or Amazon.co.uk

5. Restless
by William Boyd

Click to buy from Amazon.com or Amazon.co.uk

6. The Girls
by Lori Lansens

Click to buy from Amazon.com or Amazon.co.uk

7. Shopaholic and Baby
by Sophie Kinsella

Click to buy from Amazon.com or Amazon.co.uk

8. 300

by Frank Miller

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9. Snow Flower and the Secret Fan
by Lisa See

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10.The Memory Keeper's Daughter
by Kim Edwards

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About sponsorship

Arthur Schlesinger

Mar 8th 2007
From The Economist print edition

Arthur M. Schlesinger junior, historian and liberal, died on February 28th, aged 89

Corbis

THE true American liberal is now a vague, elusive creature. Many claim to have seen it; some even claim to have been it, in some fit of youthful idealism that they have lived to regret. In the 1980s and 1990s its American habitat became so eroded, as the behemoths of conservatism overgrazed the plains, that it was on the brink of extinction. For any politician or intellectual of ambition, the L-word was woolly-headed, dangerous and naive: an interest to be indulged only in secret, and out of the way of the police.

Yet one liberal stayed defiantly in the public view. You could spot him on New York's East Side (a natural habitat), small and spry, bouncing along as if he couldn't wait to write down the ideas for human improvement that buzzed around in his head. Or you could track him, by the cool whiff of Martinis and the sizzle of steaks, to his table among the bookshelves at the Century Club, turning the pages of Emerson as he waited for dessert. He had no patience with camouflage. The horn-rimmed glasses, the bow tie and the expression of perpetual questioning proclaimed him as a liberal (American *genus*) to everyone who saw him.

Arthur Schlesinger junior knew that he was frozen in the past. His thought had stopped, he admitted in old age, half a century before—around 1946, the year when, at 29, he had won a Pulitzer for his book on Andrew Jackson and had been made a professor of history at Harvard. He had no particular need to revise his thinking after that, because the shape of American history was now clear to him. It moved in cycles. In some ages—the 1880s, the 1920s, the 1950s, the 1980s—men's motivations were nothing but their own comfort and profit. But after sating themselves on selfishness and letting plutocrats run things for a while, Americans would recover their true virtue and passion, and work for the good of society and their country.

The bad ages of Schlesinger-history were conservative, with Republicans in power; the good were liberal, under Democrats, reaching their apotheosis with Franklin Roosevelt's New Deal of the 1930s. His simple view of American politics was stated at the end of “The Age of Jackson”:

> In the past, when liberalism had resolved the crisis and restored tranquillity, conservatism has recovered power by the laws of political gravity; then it makes a new botch of things, and liberalism again must take over in the name of the nation.

Mr Schlesinger was too young to remember the New Deal, just as he was too young to remember his

babyhood in Columbus, Ohio, before the family moved to Cambridge and his father to Harvard. But just as he said he was always an Ohioan, swiftly gulping in the air of working-class America before he became surrounded by history books, so he was always a New Dealer, “unreconstructed and unrepentant”. He wrote three huge volumes on Roosevelt, paying homage.

An historian in love

Yet even better days were to come. They began with an invitation, one misty January morning in 1961, to work as a special assistant in John Kennedy's White House. Neither he nor Kennedy knew exactly what it meant; but, stars in his eyes, he was co-opted. The historian was now at the centre of power-making, able to observe, as he most desired, “the process by which thought becomes action in the political sphere”. And, as he also more secretly desired, he was in show business.

His more important memos, such as one that advised against the Bay of Pigs expedition, were ignored. But he reported directly to Kennedy, hearing the president's gossip and fielding his frustration. To all appearances—and on the evidence of the book he wrote later, “A Thousand Days”—Mr Schlesinger was in love: with Jack, with Bobby, with Jackie, and most of all with the perfect brand of north-eastern Brahmin liberalism the Kennedys represented. Schlesinger liberalism was altruistic and perfectibilian, but it was also anti-Communist, pluralistic, pragmatic and tough. He saw all this in his boss. “He re-established the republic”, he wrote,

> as the first generation of our leaders saw it—young, brave, civilised, rational, gay, tough, questing, exultant in the excitement and potentiality of history. He transformed the American spirit...[and] made people look beyond nature and race to the future of humanity.

After this, things could only go downhill. Lyndon Johnson upset Mr Schlesinger, and Jimmy Carter struck him as conservative. The unspeakable Richard Nixon assumed a raft of new powers that Mr Schlesinger dubbed “the imperial presidency”. History's cycles turned against all that was idealistic and good. And then came the younger George Bush.

Mr Schlesinger hated everything about him: the oil interests, the doctrine of preventive war, the notion of America as redeemer-nation (“tragically mistaken”), the anti-intellectualism. His dream was to have a “quiet” telephone conversation with him, as he might have done with Kennedy, once more at the beating heart of power. But then no liberal—glasses gleaming, bow-tie quivering—had been seen in such a place for years.

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Overview

Mar 8th 2007
From The Economist print edition

Service industries in **America** hit a soft patch in February. The Institute for Supply Management's index of non-manufacturing activity fell to 54.3 in February from 59.0 in January. Labour productivity in America's non-farm businesses rose at an annualised rate of 1.6% in the fourth quarter, revised down from a preliminary estimate of 3.0%. The annualised increase in unit labour costs was revised up from 1.7% to 6.6%.

Consumer prices in **Japan** were unchanged in the year to January, after a 0.3% rise in the year to December. Prices excluding food and energy were 0.2% lower than in January 2006. Japan's unemployment rate was unchanged at 4% in January.

Retail sales in the **euro area** fell by 0.1% in the year to January, having risen by 2.2% in the year to December.

In **Germany**, where the rate of value-added tax was increased at the start of the year, retail sales fell by 4.3% in the year to January. Factory orders fell by 1% that month.

Australia's GDP rose by 1% in the fourth quarter, to be 2.8% higher than a year earlier. The Reserve Bank of Australia decided to keep its benchmark interest rate at 6.25% on March 6th.

Indonesia's central bank reduced its key interest rate by a quarter of a percentage point to 9.25%, the ninth cut in as many months.

The Bank of **Canada** kept its benchmark interest rate unchanged at 4.25%.

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About sponsorship

Output, prices and jobs

Mar 8th 2007
From The Economist print edition

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment
	latest	qtr*	2007†	2008†	latest	latest	year ago	2007†	rate‡, %
United States	+3.1 Q4	+2.2	+2.6	+2.9	+2.6 Jan	+2.1 Jan	+4.0	+1.9	4.6 Jan
Japan	+2.1 Q4	+4.8	+2.2	+2.3	+4.3 Jan	nil Jan	–0.1	+0.2	4.0 Jan
China	+10.4 Q4	na	+9.5§	+9.0§	+14.7 Dec	+2.2 Jan	+1.9	+2.5	9.8 2006
Britain	+3.0 Q4	+3.2	+2.7	+2.6	+0.5 Dec	+2.7 Jan**	+1.9	+2.2	5.5 Dec††
Canada	+2.3 Q4	+1.4	+2.4	+2.7	–3.3 Dec	+1.2 Jan	+2.8	+1.7	6.2 Jan
Euro area	+3.3 Q4	+3.6	+2.3	+2.2	+4.0 Dec	+1.8 Feb	+2.3	+1.9	7.4 Jan
Austria	+3.3 Q4	+3.3	+2.6	+2.5	+8.9 Dec	+1.6 Jan	+1.2	+1.6	4.6 Jan
Belgium	+3.1 Q3	+2.5	+2.1	+2.3	+3.5 Dec	+1.8 Feb	+2.4	+1.8	11.8 Jan‡‡
France	+2.2 Q4	+2.6	+2.1	+2.2	+0.7 Dec	+1.2 Jan	+2.0	+1.4	8.6 Dec
Germany	+3.7 Q4	+3.5	+2.2	+2.1	+5.5 Dec	+1.6 Feb	+2.1	+1.9	9.3 Feb
Greece	+4.3 Q4	na	+3.5§	+3.3§	+3.1 Dec	+2.7 Jan	+3.2	+2.8§	8.3 Q3
Italy	+2.9 Q4	+4.6	+1.8	+1.6	+5.0 Dec	+1.7 Jan	+2.2	+1.8	6.8 Q3
Netherlands	+2.7 Q4	+2.6	+2.7	+2.6	+5.6 Dec	+1.5 Feb	+1.1	+1.6	5.0 Jan††
Spain	+4.0 Q4	+4.8	+3.3	+2.8	+7.7 Jan	+2.5 Feb	+4.0	+2.5	8.6 Jan
Czech Republic	+5.8 Q3	+5.6	+4.9§	+3.9§	+3.0 Dec	+1.5 Feb	+2.8	+3.3	7.7 Feb
Denmark	+2.9 Q4	+0.6	+2.5	+2.3	+0.6 Dec	+1.8 Jan	+2.1	+1.8	3.8 Jan
Hungary	+3.2 Q4	+3.2	+2.6§	+3.0§	+10.5 Jan	+7.8 Jan	+2.7	+6.0	7.5 Jan††
Norway	+2.6 Q3	+5.2	+2.5§	+2.2§	–2.4 Jan	+1.2 Jan	+1.8	+2.6§	2.8 Jan††
Poland	+6.4 Q4	na	+5.2§	+4.4§	+15.6 Jan	+1.7 Jan	+0.7	+2.1	15.1 Jan‡‡
Russia	+6.5 Q3	na	+5.8§	+5.3§	+8.4 Jan	+8.0 Jan	+10.6	+8.8	7.1 Jan‡‡
Sweden	+4.7 Q4	+5.0	+3.5	+3.0	+4.1 Jan	+1.9 Jan	+0.6	+1.6	5.3 Jan‡‡
Switzerland	+2.2 Q4	+1.8	+2.1	+2.0	+8.2 Q3	nil Feb	+1.4	+0.9	3.3 Jan‡‡
Turkey	+3.4 Q3	na	+4.5§	+5.6§	+14.8 Jan	+10.2 Feb	+8.2	+8.4	9.1 Q3‡‡
Australia	+2.8 Q4	+4.2	+2.8	+3.2	+0.9 Q3	+3.3 Q4	+2.8	+2.8	4.5 Jan
Hong Kong	+7.0 Q4	+5.3	+4.9§	+4.8§	–0.6 Q3	+2.0 Jan	+1.9	+2.5	4.4 Jan††
India	+8.6 Q4	na	+7.8§	+7.6§	+11.1 Dec	+6.7 Jan	+4.7	+6.2	7.6 2006
Indonesia	+6.1 Q4	–1.9	+6.0§	+6.1§	+23.4 Dec	+6.3 Feb	+17.9	+6.9	10.3 2005
Malaysia	+5.7 Q4	na	+5.4§	+5.6§	+2.3 Jan	+3.2 Jan	+3.2	+3.3	3.1 Q3
Pakistan	+6.6 2006§§	na	+6.6§	+6.0§	+6.8 Sep	+6.6 Jan	+8.8	+7.4§	na
Singapore	+6.6 Q4	+7.9	+4.5§	+4.4§	+14.6 Jan	+0.3 Jan	+1.8	+1.0	2.6 Q4
South Korea	+4.0 Q4	+3.4	+6.3§	+4.5§	+7.4 Jan	+2.2 Feb	+2.0	+2.2	3.3 Jan
Taiwan	+4.0 Q4	na	+4.3§	+4.4§	+4.8 Jan	+1.7 Feb	+1.0	+1.5	3.9 Jan
Thailand	+4.2 Q4	+2.7	+4.6§	+5.0§	+7.3 Jan	+2.3 Feb	+5.6	+3.3	1.0 Dec
Argentina	+8.7 Q3	+10.8	+7.5§	+5.0§	+2.2 Jan	+9.6 Feb	+11.5	+9.8	8.7 Q4‡‡
Brazil	+3.8 Q4	+3.2	+3.4§	+3.5§	+4.5 Jan	+3.0 Jan	+5.7	+3.7	9.3 Jan‡‡
Chile	+2.9 Q3	–0.2	+5.3§	+5.6§	+3.7 Jan	+2.7 Feb	+4.1	+2.5	6.1 Jan††††
Colombia	+7.7 Q3	+8.1	+4.8§	+4.1§	+12.3 Dec	+5.3 Feb	+4.2	+4.2	11.8 Dec‡‡
Mexico	+4.3 Q4	+1.9	+3.3§	+3.4§	+1.6 Dec	+4.0 Jan	+3.9	+3.8	4.0 Jan‡‡
Venezuela	+10.2 Q3	na	+5.0§	+2.7§	+12.2 Sep	+20.4 Feb	+12.5	+20.2	10.1 Q3‡‡
Egypt	+7.1 Q3	na	+7.1§	+6.4§	+4.0 2005	+12.4 Jan	+3.4	+8.5	10.9 Q2‡‡
Israel	+3.7 Q4	+8.0	+5.2§	+4.7§	+10.5 Dec	+0.1 Jan	+2.7	+1.9	7.7 Q4
Saudi Arabia	+4.2 2006§	na	+4.1§	+5.0§	na	+2.9 Dec	+1.2	+2.5§	na
South Africa	+6.1 Q4	+5.6	+4.5§	+5.1§	+5.0 Dec	+6.0 Jan	+4.0	+5.4	25.6 Mar‡‡
MORE COUNTRIES Data for the countries below are not provided in printed editions of *The Economist*									
Estonia	+11.3 Q3	+11.7	+9.2§	+7.6§	+6.8 Jan	+4.7 Feb	+4.6	+4.3§	4.3 Dec
Finland	+5.3 Q4	+3.8	+2.7§	+2.5§	–3.2 Jan	+2.3 Jan	+0.8	+1.9§	7.0 Jan
Iceland	+0.3 Q3	+0.4	+2.7§	+3.7§	na	+7.4 Feb	+4.1	+4.9§	1.2 Dec‡‡
Ireland	+7.7 Q3	+10.8	+5.3	+5.3§	+17.0 Dec	+5.2 Jan	+3.0	+3.4§	4.3 Feb
Latvia	+11.9 Q4	na	+9.2§	+7.5§	+3.2 Dec	+7.1 Jan	+7.5	+6.0§	6.1 Dec
Lithuania	+6.6 Q4	+6.6	+6.5§	+6.4§	na	+4.0 Jan	+3.5	+1.8§	5.7 Dec
Luxembourg	+5.4 Q3	+4.1	+4.6§	+4.0§	+4.5 Nov	+2.3 Jan	+2.9	+3.0§	4.9 Jan‡‡
New Zealand	+1.3 Q3	+1.0	+3.1§	+3.1§	–1.4 Q3	+2.6 Q4	+3.1	+3.0§	3.7 Q4
Peru	+9.0 Dec	na	+5.7§	+4.4§	+11.9 Dec	+0.4 Feb	+2.7	+1.6	11.6 Jan‡‡
Philippines	+6.5 Q4	+5.6	+5.3§	+5.1§	–9.2 Dec	+2.6 Feb	+7.6	+4.0	7.3 Q4‡‡
Portugal	+1.5 Q3	–0.6	+1.4§	+2.0§	+3.0 Jan	+2.6 Jan	+2.7	+2.4	8.2 Q4‡‡
Slovakia	+9.6 Q4	na	+6.3§	+5.4§	+17.5 Jan	+3.0 Jan	+4.1	+2.8	12.0 Dec
Slovenia	+5.6 Q3	na	+4.0§	+3.8§	+4.2 Dec	+2.1 Feb	+2.2	+2.3	8.6 Dec‡‡

*% change on previous quarter, annual rate. †The Economist poll. ‡National definitions. §Economist Intelligence Unit estimate/forecast. **RPI inflation rate 4.2% in Jan. ††Latest three months. ‡‡Not seasonally adjusted. §§Year ending June.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; Centre for Monitoring Indian Economy; OECD; ECB

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The Economist commodity-price index

Mar 8th 2007
From The Economist print edition

The Economist commodity-price index
2000=100

	Feb 27th	Mar 6th*	% change on one month	% change on one year
Dollar index				
All items	192.6	187.6	+2.6	+21.2
Food	159.7	157.0	+1.0	+15.0
Industrials				
All	235.3	227.1	+4.0	+27.4
Nfa†	157.1	152.8	–1.5	+2.3
Metals	277.9	267.7	+5.9	+38.0
Sterling index				
All items	148.6	147.7	+4.9	+9.2
Euro index				
All items	134.5	132.3	+1.3	+9.9
Gold				
$ per oz	679.47	641.82	–1.7	+16.8
West Texas Intermediate				
$ per barrel	60.51	60.72	+2.8	–1.3

*Provisional †Non-food agriculturals.

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The Economist poll of forecasters, March averages

Mar 8th 2007
From The Economist print edition

The Economist poll of forecasters, March averages (previous month's, if changed)

	Real GDP, % change Low/high range		Real GDP, % change average		Consumer prices % increase		Current account % of GDP	
	2007	2008	2007	2008	2007	2008	2007	2008
Australia	2.5/3.5	2.5/3.8	2.8	3.2	2.8 (2.9)	2.6	−5.1 (−5.0)	−5.1
Belgium	1.8/2.5	2.1/2.6	2.1	2.3	1.8 (1.9)	1.9	2.1 (2.0)	2.2
Britain	2.3/3.1	2.1/3.1	2.7 (2.5)	2.6	2.2	2.0	−2.9 (−2.8)	−3.1
Canada	2.1/3.0	2.4/3.0	2.4 (2.3)	2.7	1.7	2.1	1.1	0.9
France	1.8/2.4	1.9/2.3	2.1 (2.0)	2.2	1.4	1.7	−1.4 (−1.1)	−1.4
Germany	1.3/2.6	1.4/2.7	2.2 (1.7)	2.1	1.9 (2.1)	1.5	4.7 (4.1)	4.8
Italy	1.1/2.3	1.4/2.1	1.8 (1.3)	1.6	1.8 (1.9)	2.0	−1.9 (−1.7)	−1.9
Japan	1.7/2.6	1.6/2.7	2.2 (1.9)	2.3	0.2 (0.4)	0.6	3.8	3.8
Netherlands	2.4/3.3	2.2/3.0	2.7 (2.5)	2.6	1.6 (1.8)	1.9	7.7 (7.6)	7.8
Spain	2.4/3.7	2.2/3.1	3.3 (3.0)	2.8	2.5 (2.6)	2.8	−8.7 (−8.5)	−8.5
Sweden	2.8/4.0	2.6/3.5	3.5	3.0	1.6 (1.8)	1.8	6.4 (6.3)	6.1
Switzerland	1.7/2.4	1.8/2.3	2.1 (2.0)	2.0	0.9 (0.9)	1.2	15.3 (14.0)	15.1
United States	2.0/2.8	2.6/3.3	2.6	2.9	1.9	2.3	−6.1	−5.9
Euro area	2.0/2.6	1.9/2.4	2.3 (2.0)	2.2	1.9 (2.0)	1.9	nil (−0.1)	nil

Sources: ABN AMRO, BNP Paribas, Citigroup, Decision Economics, Deutsche Bank, Economist Intelligence Unit, Goldman Sachs, HSBC Securities, KBC Bank, JPMorgan Chase, Morgan Stanley, Scotiabank, UBS

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Trade, exchange rates, budget balances and interest rates

Mar 8th 2007
From The Economist print edition

Trade, exchange rates, budget balances and interest rates

	Trade balance* latest 12 months, $bn	Current-account balance latest 12 months, $bn	Current-account balance % of GDP 2007†	Currency units, per $ Mar 7th	Currency units, per $ year ago	Budget balance % of GDP 2007‡	Interest rates, % 3-month latest	Interest rates, % 10-year gov't bonds, latest
United States	−836.1 Dec	−880.3 Q3	−6.1	–	–	−2.2	5.16	4.50
Japan	+81.0 Dec	+170.4 Dec	+3.8	117	118	−4.9	0.57	1.61
China	+183.5 Jan	+160.8 2005	+6.7	7.74	8.05	−1.6	2.82**	3.15
Britain	−155.3 Dec	−69.7 Q3	−2.9	0.52	0.58	−2.7	5.48	4.76
Canada	+47.2 Dec	+21.4 Q4	+1.1	1.18	1.15	0.8	4.19	3.99
Euro area	−9.4 Dec	−20.2 Dec	nil	0.76	0.84	−1.5	3.87	na
Austria	−0.2 Dec	+12.2 Q3	+1.3	0.76	0.84	−1.1	3.87	3.91
Belgium	+16.5 Dec	+6.8 Sep	+2.1	0.76	0.84	0.1	3.92	3.93
France	−36.6 Dec	−31.8 Dec	−1.4	0.76	0.84	−2.4	3.87	3.92
Germany	+206.0 Dec	+129.4 Dec	+4.7	0.76	0.84	−1.4	3.87	3.87
Greece	−44.3 Dec	−29.6 Dec	−7.1†	0.76	0.84	−2.9	3.87	4.11
Italy	−26.2 Dec	−42.1 Dec	−1.9	0.76	0.84	−3.2	3.87	4.09
Netherlands	+41.4 Dec	+59.7 Q4	+7.7	0.76	0.84	0.6	3.87	3.90
Spain	−112.7 Dec	−110.7 Nov	−8.7	0.76	0.84	0.3	3.87	3.92
Czech Republic	+1.9 Jan	−5.2 Q3	−2.7	21.4	24.2	−4.2	2.57	3.71
Denmark	+6.7 Dec	+6.7 Dec	+3.0	5.67	6.26	3.5	4.06	3.88
Hungary	−2.7 Dec	−6.9 Q3	−5.9	192	216	−7.1	8.15	7.01
Norway	+56.0 Jan	+56.1 Q4	+17.5†	6.20	6.72	19.3	4.33	4.42
Poland	−5.1 Dec	−7.1 Dec	−2.2	2.96	3.27	−2.6	4.21	5.20
Russia	+140.8 Dec	+95.6 Q4	+7.3	26.2	28.1	6.0	10.50	6.34
Sweden	+20.0 Jan	+28.4 Q4	+6.4	7.05	7.94	2.9	3.20	3.72
Switzerland	+9.7 Jan	+105.9 Q3	+15.3	1.22	1.31	1.2	2.22	2.55
Turkey	−52.2 Jan	−31.9 Dec	−6.6	1.43	1.35	−2.4	19.18	19.86
Australia	−9.2 Jan	−40.9 Q4	−5.1	1.29	1.36	1.2	6.35	5.65
Hong Kong	−18.9 Jan	+19.3 Q3	+9.3	7.82	7.76	2.0	4.25	4.12
India	−54.6 Jan	−13.7 Q3	−2.2	44.5	44.5	−4.3	7.46	8.16
Indonesia	+39.7 Jan	+7.0 Q3	+1.4	9,210	9,315	−0.9	8.81	6.46§
Malaysia	+29.5 Dec	+22.2 Q3	+11.1	3.51	3.72	−4.3	3.68	5.12§
Pakistan	−13.1 Jan	−6.5 Q4	−4.8†	60.7	60.0	−4.6	10.19	6.77§
Singapore	+34.4 Jan	+36.3 Q4	+25.2	1.53	1.63	0.3	3.23	3.04
South Korea	+17.3 Feb	+5.5 Jan	nil	949	982	0.4	4.94	4.86
Taiwan	+13.8 Feb	+25.2 Q4	+5.0	33.0	32.5	−2.2	1.82	2.05
Thailand	+2.2 Dec	+3.2 Dec	nil	32.8	39.1	−1.2	4.70	4.39
Argentina	+12.0 Jan	+6.7 Q3	+1.6	3.10	3.08	1.0	9.69	na
Brazil	+45.8 Feb	+14.2 Jan	+0.3	2.11	2.17	−2.2	12.93	6.16§
Chile	+24.4 Feb	+5.2 Q3	+2.2	537	533	4.3	5.04	5.10§
Colombia	nil Nov	−2.3 Q3	−2.1	2,218	2,254	−1.5	7.10	6.13§
Mexico	−8.2 Jan	−1.5 Q4	−1.1	11.1	10.7	−0.4	7.05	7.76
Venezuela	+33.0 Q4	+27.2 Q4	+10.1	3,798	2,721	−3.8	10.26	6.55§
Egypt	−11.7 Q3	+3.0 Q3	+1.1	5.71	5.74	−8.0	8.37	5.32§
Israel	−7.3 Jan	+6.7 Q3	+1.5	4.22	4.71	−2.8	4.31	4.96
Saudi Arabia	+165.7 2006	+90.0 2005	+17.3†	3.75	3.75	12.3	5.16	na
South Africa	−10.2 Jan	−13.5 Q3	−4.9	7.40	6.31	−2.0	9.15	7.66
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Estonia	−3.4 Dec	−2.3 Dec	−12.7†	11.9	13.1	1.3	3.97	na
Finland	+12.1 Dec	+12.6 Dec	+5.6†	0.76	0.84	2.3	3.84	3.94
Iceland	−2.1 Jan	−4.4 Q4	−19.7†	67.1	69.5	2.1	15.06	na
Ireland	+35.5 Dec	−6.5 Q3	−4.2†	0.76	0.84	0.8	3.87	3.91
Latvia	−5.0 Dec	−4.3 Dec	−19.5†	0.54	0.58	−1.2	5.03	na
Lithuania	−5.2 Dec	−3.4 Dec	−10.3†	2.63	2.90	−0.5	3.94	na
Luxembourg	−5.2 Dec	+4.8 Q3	na	0.76	0.84	−0.8	3.87	na
New Zealand	−4.0 Jan	+6.1 Q3	−9.9†	1.46	1.54	3.5	6.75	5.81
Peru	+8.9 Dec	+2.5 Q4	+0.7	3.19	3.34	0.1	4.50	na
Philippines	−4.5 Dec	+4.4 Sep	+3.1	48.8	51.4	−1.0	5.63	na
Portugal	−23.2 Nov	−18.2 Dec	−7.8†	0.76	0.84	−3.7	3.87	4.05
Slovakia	−3.1 Dec	−5.4 Oct	−6.2†	26.0	31.5	−3.0	4.60	4.34
Slovenia	−2.0 Dec	−1.2 Dec	−1.6†	0.76	0.84	−1.2	na	na

*Merchandise trade only. †The Economist poll. ‡Economist Intelligence Unit forecast. §Dollar-denominated bonds. **New series.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; JPMorgan; Bank Leumi le-Israel; Centre for Monitoring Indian Economy; Danske Bank; Hong Kong Monetary Authority; Standard Bank Group; UBS; Westpac.

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Markets

Mar 8th 2007
From The Economist print edition

Markets

	Index Mar 7th	% change on one week	% change on Dec 29th 2006 in local currency	% change on Dec 29th 2006 in $ terms
United States (DJIA)	12,192.5	−0.6	−2.2	−2.2
United States (S&P 500)	1,392.0	−1.1	−1.9	−1.9
United States (NAScomp)	2,374.6	−1.7	−1.7	−1.7
Japan (Nikkei 225)	16,764.6	−4.8	−2.7	−0.5
Japan (Topix)	1,689.6	−3.6	+0.5	+2.7
China (SSEA)	3,043.2	+0.6	+8.1	+9.0
China (SSEB, $ terms)	170.7	−4.3	+30.1	+31.2
Britain (FTSE 100)	6,156.5	−0.2	−1.0	−2.4
Canada (S&P TSX)	12,989.6	−0.4	+0.6	−0.6
Euro area (FTSE Euro 100)	1,263.5	−1.4	−1.2	−1.5
Euro area (DJ STOXX 50)	4,022.0	−1.6	−2.4	−2.7
Austria (ATX)	4,368.1	+0.8	−2.1	−2.4
Belgium (Bel 20)	4,301.2	−0.1	−2.0	−2.3
France (CAC 40)	5,455.1	−1.1	−1.6	−1.9
Germany (DAX)*	6,617.8	−1.5	+0.3	nil
Greece (Athex Comp)	4,470.7	−0.7	+1.7	+1.4
Italy (S&P/MIB)	40,370.0	−1.9	−2.6	−2.9
Netherlands (AEX)	481.9	−1.7	−2.7	−3.0
Spain (Madrid SE)	1,544.6	−2.3	−0.7	−1.0
Czech Republic (PX)	1,626.9	−0.1	+2.4	−0.2
Denmark (OMXCB)	427.3	−1.5	+0.7	+0.5
Hungary (BUX)	22,522.4	−3.6	−9.3	−9.9
Norway (OSEAX)	494.6	−0.8	−1.5	−1.1
Poland (WIG)	51,415.6	−0.9	+2.0	nil
Russia (RTS, $ terms)	1,767.1	−4.9	−8.5	−8.1
Sweden (Aff.Gen)	370.4	+0.6	+1.4	−1.6
Switzerland (SMI)	8,878.4	+1.0	+1.1	+1.0
Turkey (ISE)	40,406.5	−2.5	+3.3	+2.5
Australia (All Ord.)	5,803.3	−0.2	+2.8	+1.3
Hong Kong (Hang Seng)	18,918.6	−3.7	−5.2	−5.7
India (BSE)	12,579.8	−2.8	−8.8	−9.2
Indonesia (JSX)	1,743.2	+0.1	−3.5	−5.7
Malaysia (KLSE)	1,156.6	−3.3	+5.5	+6.0
Pakistan (KSE)	11,146.3	−0.3	+11.0	+11.3
Singapore (STI)	3,059.2	−1.4	+2.5	+3.0
South Korea (KOSPI)	1,411.0	−0.5	−1.6	−3.6
Taiwan (TWI)	7,480.9	−5.3	−4.4	−5.5
Thailand (SET)	670.4	−1.0	−1.4	+8.7
Argentina (MERV)	1,995.1	−3.5	−4.6	−5.6
Brazil (BVSP)	42,667.0	−2.8	−4.1	−3.1
Chile (IGPA)	13,016.2	+1.3	+5.2	+4.2
Colombia (IGBC)	10,185.3	+0.7	−8.7	−7.8
Mexico (IPC)	26,184.4	−1.7	−1.0	−3.8
Venezuela (IBC)	51,741.7	+2.4	−0.9	−12.8
Egypt (Hermes)	61,452.4	−2.4	+0.3	+0.4
Israel (TA-100)	958.8	−1.2	+4.0	+3.9
Saudi Arabia (Tadawul)	8,772.4	+7.3	+9.7	+9.8
South Africa (JSE AS)	25,280.4	−2.0	+1.5	−3.4
Europe (FTSEurofirst 300)	1,467.3	−1.0	−1.1	−1.4
World, dev'd (MSCI)	1,470.4	−1.3	−0.9	−0.9
Emerging markets (MSCI)	866.3	−3.3	−5.1	−5.1
World, all (MSCI)	363.2	−1.5	−1.2	−1.2
World bonds (Citigroup)	667.2	+0.4	+1.4	+1.4
EMBI+ (JPMorgan)	413.2	+0.1	+1.4	+1.4
Hedge funds (HFRX)	1,278.4	−1.1	+0.2	+0.2
Volatility, US (VIX)	15.2	15.4	11.6	(levels)
CDSs, Eur (iTRAXX)†	20.4	+6.7	−4.7	−5.0
CDSs, N Am (CDX)†	33.1	+16.1	+12.8	+12.8
Carbon trading (EU ETS) €	0.92	+15.0	−85.4	−85.4

*Total return index. †Credit-default swap spreads, basis points.

Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Reuters; WM/Reuters; JPMorgan Chase; Bank Leumi le-Israel; CBOE; CME; Danske Bank; EEX; HKMA; Markit; Standard Bank Group; UBS; Westpac.

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City economies

Mar 8th 2007
From The Economist print edition

Big cities pack a punch equal to some national economies. The GDP of Tokyo or New York, for example, is broadly similar to that of Canada, a G7 country. The two cities followed by Los Angeles will hold their position at the top of the table in 2020, according to forecasts from PricewaterhouseCoopers, an accountancy firm. However, London will pass Paris and Chicago to take fourth place thanks to buoyant expansion in business and financial services. At present, the top 15 city economies are dominated by those in the developed world. But by 2020, São Paulo will have elbowed its way into the premier league as part of a trend for those in emerging economies to move up the rankings.

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